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PERMANENT ADDRESS:

22, TIVIDALE STREET,
TIPTON,
STAFFS. ENGLAND

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THE UNIVERSITY OF ALBERTA

AN EXPERIMENT ON LEARNING GROUPS:
A METHODOLOGICAL CRITIQUE

BY

© MICHAEL JAMES O'NEIL

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

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FALL, 1973

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "AN EXPERIMENT ON LEARNING GROUPS: A METHODOLOGICAL CRITIQUE", submitted by MICHAEL JAMES O'NEIL in partial fulfilment of the requirements for the degree of Master of Education in Learning and Social Psychology.

John McLeish

Supervisor

Peter J. Miller

L. Stewin

Date 29 JUNE 1973

TO THE MEMORY OF MY FATHER,

FOR MY MOTHER,

AND

FOR MY WIFE, PAT.

ABSTRACT

The research study was concerned with (1) investigating the personality change (pre- to post-treatment) of the subjects as measured by the 16PF and the MMPI, and (2) examining the subjects' emotional behaviour in clinical interviews prior and subsequent to treatment. A scheme was developed (Verbal Affect Scoring Technique -- VAST) which enabled the investigator to code verbal emotional behaviour. Operational definitions for emotional behaviour are provided. In the course of this study, methodological weaknesses materialized. For instance, interviewer-interviewee 'interference' effects were discovered.

Subjects were thirteen psychiatric out-patients from the Royal Alexandra Hospital, Edmonton. The two forms of psychotherapy they received were (1) a Group-Analytic Treatment, and (2) a Gestalt Treatment. The subjects were randomly assigned to one or other of the treatments. Each treatment consisted of twenty group sessions of one hour each over a one month period.

A statistical analysis of the personality test results revealed that whilst personality changes seemed to have occurred, using the normal criteria of probability, item analysis revealed that these were in no way systematic and lacked 'psychological' meaning. On the other hand, the VAST technique uncovered changes in the emotional behaviour of both the clients and the interviewer, and tentative conclusions were drawn about 'beneficial' therapeutic change.

A methodological critique of the experiment was carried out, and recommendations for future outcome studies made.

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CHAPTER I

Introduction

The literature of group psychology abounds with the claims and counterclaims of numerous psychologists regarding the effectiveness of group psychotherapy, and more generally the group encounter movement. The debate (on whether or not group psychotherapy has beneficial effects) is kept alive by spirited invective and by euphoric praise. This particular debate rages around both individual and group psychotherapy, including the whole spectrum of treatments -- ranging from psychoanalysis to 'Gestalt' therapy, to more modern and radical therapies such as those propounded by Perls (1969) and Janov (1970).

Historically speaking, Eysenck's classic paper (1952a) on outcomes of psychotherapy seems to be the watershed from which many critics still draw their sustenance (Truax and Carkhuff, 1967; Bergin, 1971). Bergin (1971) postulates that the debate is still rather heated, so to speak, because of three major factors:

> "... (a) the fact that the contest has raged around an absolutely vital question, namely, whether traditional therapies have any unique, positive effects at all, (b) the fact that most of the evidence on the subject is ambiguous enough to be subject to considerable variation in interpretation, and (c) the fact that (a) and (b) have permitted individuals to adopt highly subjective and emotionally tinged views of the subject which are thus difficult to modify by rational argument or evidence." (p. 218 -- Bergin, in Bergin and Garfield, 1971).

The group encounter movement (of which group psychotherapy is an important branch, distinguished by the fact that it caters mainly for known pathological individuals) does indeed seem to have staunch advocates. Generally, these have little or no research evidence to support their claims that their unique treatment is a "cure-all" and that other treatments are contraindicated. At best such workers postulate that they are assured of the recovery of their clients on the basis of a report on how they 'feel'. This evaluation is confirmed by testimonial-type evidence. Generally, such evidence is subjective, unsystematic and clearly may be influenced by a multitude of confounding variables.

The small group therapy movement is indeed a child of our times. Especially in North America, the movement pervades much of our daily lives, our language, our mass media. Marriage counsellors and psychiatrists, to mention but a few of the active proponents, are involved to an ever-increasing degree with group training and therapy. It is an extremely popular form of therapy, both for the supposedly socially adjusted as well as for the socially maladjusted. For the former, techniques enabling such esoteric states as 'self-actualization' to be realized are practiced. To come to terms with one's own reality and to be fully cognizant of, and behaviourally congruent with, one's emotions are frequent claims which one may hear at briefing sessions prior to group treatment. For the dysfunctional and socially maladjusted on the other hand, group activity is claimed to provide a cure in the form of a return to 'normality' and adjustment. Even the possibility of emerging as a superior being is not discounted! Thus group training is regarded by a great number of laymen and professionals alike as a sort of universal cure-all for most of the behavioural and 'psychic' dysfunctions which exist in today's society.

The social scientist, engaged in the pursuit of the objective 'truth' of what happens in a small encounter group, as external, non-involved and emotionally detached observer of group-interaction, is probably closest to the 'objective' reality of group action. This is the kind of person 'most able' to make judgements about the ultimate outcomes of psychotherapy. The non-participating investigator is interested especially in 'hard' facts - the objective data - which will enable him to say whether the group members have changed in this or that direction; that they have learned this or that about themselves or other group members, or about group dynamics. What they have learned may, or may not, be transferable to their work-a-day situations. It is the social scientist's job to look for and report such changes, and to offer an account of them on the basis of events occurring in the actual group activity. Additionally, valuable information may be obtained from a careful scrutiny of the data collected by questionnaire, and self-report during interview, prior to and following a given treatment.

The major thesis of this project is that trained observers of group activity are more aware of, and take into account, their vicarious involvement, and (discounting this involvement), are 'closest' to the objective 'truth' of the on-going action. The purpose of this research therefore becomes one of investigating systematically the outcomes of psychotherapy. What changes take place in the personalities of the participants? Do they learn anything? Does their emotional behaviour alter? In short, what are the benefits of exposure to small group psychotherapy?

This thesis is devoted to 'an experiment on learning groups'.

The subject matter is, in fact, two psychotherapy groups, and the 'learning' under investigation is any change in behavioural patterns or basic personality traits or emotional behaviour of the subjects. In the course of this study the necessity for the methodological critique became apparent as certain unexpected developments in the execution of this experiment emerged.

Overview

Chapter I is devoted to a statement of the problem, and discusses the "emotionally tinged views" of research workers and practitioners in the field of group psychology.

Chapter II presents a review of the relevant literature on personality theory and the theory of emotion(s). It is intended to set the stage, so to speak, for the various instruments - 16 PF (Cattell), the MMPI (Hathaway & McKinley) for the measurement of personality traits, and the Verbal Affect Scoring Technique (V.A.S.T.) developed by this author for the evaluation of alterations in emotional behavior - employed in this study.

Chapter III is a statement of the Research Design, Data Collection and Preparation. It includes information concerning the testing instruments - that is, their construction and statistical properties. The Problem is also outlined.

Chapter IV concerns itself with the presentation and discussion of the results of the personality tests, and addresses itself to the question: Personality Change in Small Groups - Fact or Fiction?

Chapter V looks at the changes in emotional behaviour, by theme, of the participant in pre- and post-clinical interviews. The results of the Verbal Affect Scoring Technique are analysed and discussed.

Finally, Chapter VI contains the methodological critique of the whole experiment, the implications of the study for psychology and education, and a summary statement.

CHAPTER II

A REVIEW OF THE LITERATURE RELATING TO PERSONALITY MEASUREMENT AND EMOTION

This chapter concerns itself with posing the basic questions under review. In the first section the literature relating to the measurement of the personality traits or dimensions is discussed, not from a general point of view but from the perspective of two instruments currently used: the 16PF (devised by Cattell) and the MMPI (devised by Hathaway and McKinley). These tests are critically evaluated in terms of their underlying theoretical rationale.

Secondly, a rationale for the Verbal Affect Scoring Technique (VAST) is developed. This is achieved by a critical survey of related literature, and from closely related analytical schemes. A short section on Bales' Interaction Process Analysis is included for this purpose.

The review of the literature makes no attempt to cover the whole ambit on any of the topics. Rather, it selectively and sequentially deals with the various issues. In those cases where additional information would help the reader, reference is made to more comprehensive sources. The main emphasis, therefore, in reviewing the literature is to illustrate the general development of this thesis.

PERSONALITY: A THEORETICAL RATIONALE FOR ITS MEASUREMENT

(a) Raymond Cattell and the Sixteen Personality Factor Questionnaire

Cattell's theoretical formulations (see references, 1946-1971) are the direct result of thirty or so years of active experimental research - research based on a nomothetic system of factor analysis. In order that a critical review of his work be carried out, it is essential to delineate his basic research procedures and techniques, his system of personality assessment and measurement, and his basic constructs.

To open the discussion with a quotation from Cattell is apposite as a clear statement of Cattell's aspirations in personality research:

> "Personality is that which permits a prediction of what a person will do in a given situation. The goal of psychological research in personality is thus to establish laws about what different people will do in all kinds of social and general environmental situations." (1950, p. 2, Cattell's italics)

With this statement clearly in mind, it is first necessary to look at the mathematical techniques which Cattell and other psychometricians are using.

Univariate and Multivariate Analysis

Science has customarily stressed, as a modus operandi, the univariate method of analysis. Quite simply, the univariate method involves the manipulation of one variable at a time in order to discover causal relationships. The emphasis in the natural sciences is to manipulate one variable (the independent one) and to observe concurrent changes in the second or dependent variable. All other variables are kept constant. This is a fairly simple task in the case of, say, Chemistry or Physics. Robert Boyle, for instance, in his classical experiments with gases in the seventeenth century, discovered that if he varied the pressure on a gas (at constant temperature) the volume of the gas co-varied - the relation being one of inverse proportion. This, of course, is a clear-cut experiment, with only three variables involved (P. T. and V). More precisely, only three variables were being investigated; others such as molecular size were not deemed pertinent and could be dispensed with, except under certain limiting conditions, when van der Waal's more elaborate statement applies.

The success of the classical method has been, without doubt, instrumental in advancing man's knowledge of both the natural and behavioural sciences. The work of Ivan Pavlov in Russia in the early part of this century is a remarkable testimony to the efficacy of this methodology; as are the enormous advances in technology during the scientific era.

In the scientific analysis of personality, as carried out by Cattell, a second, more complex technique has been developed: multivariate analysis. Here many variables are allowed simultaneously to operate. They are brought under scrutiny by making measurements of those which it is possible to measure. The emergence of this particular methodology is due mainly to the contributions of such men as Francis Galton, Karl Pearson, Charles Spearman, and Cyril Burt in Britain, and Louis Thurstone, Guilford, Cattell and others in America. In essence, the multivariate method enables the experimentor to examine a naturalistic-behavioural environment, where numerous variables are operating. Subsequently, it is the aim to tease out, as it were, the salient variables of the investigation as well as those which materialise extemporaneously. Consequently, it is believed possible, according to this model, to study man's complex behavioural activity in a real-life situation. It is hoped in this way to determine orderly sequences which govern his behaviour. Manipulation, control and 'prediction' are therefore important by-products of such a method.

The univariate experimental method is only adequate when single processes are isolated. But when "complex phenomena" like personality are to be studied, the observations must include the holistic pattern of interaction and the sum-total of experimental variables. This necessitates a multivariate type of analysis. Subsumed under this general rubric (Multivariate Analysis) are the mathematical tools and procedures by which the influence of individual variables is teased out. These procedures include Analysis of Variance, of Co-Variance, and Factor Analysis.

Factor Analysis

Cattell (1952) provides a detailed account of the theoretical foundation to his type of factor analysis as employed in both education and psychology. A recent practical application of the technique in small group research is furnished, among others by Bedecki (1972).

Although it is not the author's intention to delve deeply into factor analysis, an epitome is needed to make Cattell's procedures clear. The primary purpose of factor analysis is to analyze the intercorrelations of a defined set of variables with each other. It is therefore a multivariate analysis method. Once the intercorrelations are determined, those variables which 'load' together on some hypothetical "factor" are said to 'go-together'. Indeed they constitute the underlying factor. Cattell's research led him to postulate the existence of sixteen primary personality factors (Table I, p. 14). These are all bipolar factors, e.g. Factor A: 'Outgoing' versus 'Reserved'. Cattell derived these factors by using questionnaires, ratings and 'objective' observational techniques (Cattell, 1970).

Structure of Personality (Traits)

Historically speaking, the major developments in the factor analysis of personality have emerged in the past fifty or so years. Mention must be made of the impetus given to this field of endeavour by British and American researchers investigating the primary abilities, or intellectual 'factors of the mind'. As is often the case in psychological theorizing, a bipolar and seemingly irreconcilable methodological debate ensued, and continues even to this day. At root, is the proposition that human abilities are hierarchically structured (Burt, 1941, 1949; Spearman, 1927; and Vernon, 1950), and the counter proposal that the intellect is multifaceted (Thurstone, 1938, 1947; Guilford, 1967, 1971; and Cattell, 1946, 1971). But this is incidental to the present review, except that it does anticipate Cattell's hierarchical arrangement of personality traits.

According to Cattell, the most fundamental and important unit of the structural theory is the 'trait'. It is the unit by which personality is measured, and from which it is built. Traits are functional unities of behaviour. They are common (in varying degrees) to the species, or they may be intrinsic and unique to the individual. A distinction is made between 'source' and 'surface' traits; between the environmental [illegible] genetic influences on traits; and between 'Dynamic', 'Ability', and 'Temperament' traits.

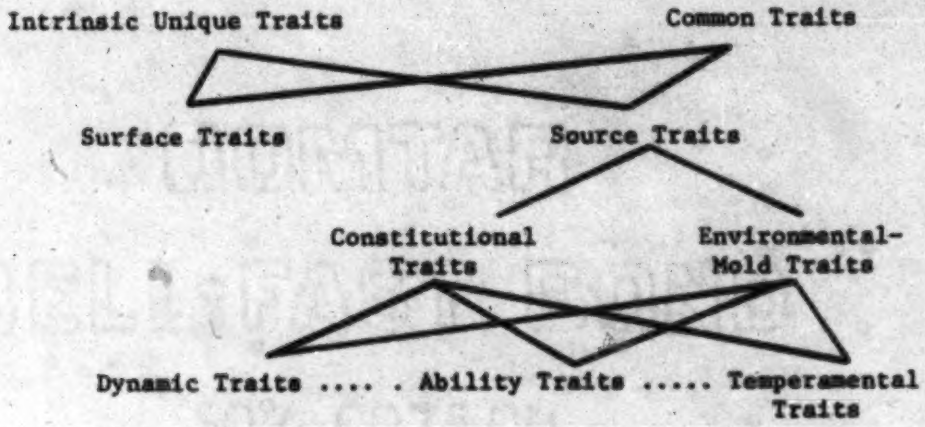
The most vital distinction in Cattell's theory is that between source and surface traits. The former are obtained by the factor analysis from raw data: they are equivalent to the sixteen factors which constitute his 16PF test. A source trait is defined as: "a factor-dimension, stressing the proposition that variations along it are determined by a single, unitary influence or source" (Cattell, 1966, p. 374). The surface trait, on the other hand, is defined as: "a set of personality characteristics which are correlated but do not form a factor, hence are believed to be determined by more than one influence or source" (Cattell, 1966, p. 375).

Surface traits are clusters of manifest variables that 'go-together'. They represent the overt interaction of the 'pure', underlying and unitary source traits. Alternatively, the surface trait may be labelled a 'syndrome' when pathological (Cattell, 1966, p. 67). The 'type' is conceptualized as the interaction of surface traits -- a conglomeration, or "particular constellation of scores on factors or other variables which occurs with high frequency in the population, relative to other possible combinations" (Cattell, 1966, p. 375). The source traits are centrally important because not only do they allow for a parsimonious description of personality, in addition they are the "real structural influences underlying personality". It is now but a very short stride to the conclusion that they have the most utility in the 'prediction' of behaviour, in Cattell's manner.

Cattell's system appears as a four-level arrangement of traits. The two higher levels (in the sense of being closer to the manifest behaviour) have now been covered in the above discussion. The next level deals with those traits which are related to the perennial question: nature or nurture as determinants of personality? Cattell takes the easy way out and reveals that both heredity and environment act as joint forces in shaping the individual personality. This is in line with his stance on intelligence, where he posits two major determinants: (a) Fluid Intelligence, on the nature side of the continuum; and (b) Crystallized Intelligence, on the nurture side (Cattell, 1971, passim). Here, again, we see a further debt of Cattell's, in this case to Spearman, Burt and Vernon. Cattell points out that some source traits are determined solely by hereditary - or as he puts it "constitutional" - factors; others are the end-product of environmental conditions. Yet others result from the interaction of environmental and genetic or hereditary influences. Surface traits, since they are an integral of many interacting source traits, invariably reflect a combination of genetic and environmental influences.

The final level in the four-tier model that requires attention is the modality. There are three modalities through which traits may be expressed. If the trait is motivational in nature, then it is a 'dynamic' one; if basically concerned with cognition then it is an 'ability' trait; finally, if it reflects the emotional state, personal tempo, or general style of the individual, then it is a 'temperament' trait.

Figure 1. Inter-relationship of Traits (Cattell)


Intrinsic Unique Traits
Common Traits
Surface Traits
Source Traits
Constitutional Traits
Environmental-Mold Traits
Dynamic Traits .... . Ability Traits ..... Temperamental Traits

(Cattell, 1946, p. 159)

The 'primary' source traits, obtained by factor analysis of the questionnaire and rating data, number sixteen: they are listed in Table I, Twelve of these factors, A to O inclusive, are obtained from both questionnaire and rating domains; the other four, Q_1 to Q_4, are found only in the realm of the questionnaire. The primary, secondary and higher order factors which Cattell discovered are oblique, that is, for the primaries, they are unitary influences or source traits.

Table II presents the eight secondary source traits of the 16 PF, which are obtained by factor analysis of the first sixteen primaries. The first two (QI and QII) account for most of the variance, and are perhaps the most important from a clinical point of view. Other research workers however, have scrutinised Cattell's raw material and arrived at different conclusions as to the exact

TABLE I

Cattell's Sixteen Personality Factors (Primary Source Traits)

Factor	Technical Title	Popular Label
A	*Affectothymia*-Sizothymia	Outgoing-Reserved
B	Intelligence (*High*-Low)	More or Less Intelligent
C	Ego-strength (*High*-Low)	Stable-Emotional
E	*Dominance*-Submissiveness	Assertive-Humble
F	*Surgency*-Desurgency	Happy-go-lucky--Sober
G	Super-ego Strength (*High*-Low)	Conscientious-Expedient
H	*Parmia*-Threctia	Venturesome-Shy
I	*Premsia*-Harria	Tender-minded--Tough-minded
L	*Protension*-Alaxia	Suspicious-Trusting
M	*Autia*-Praxernia	Imaginative-Practical
N	*Shrewdness*-Artlessness	Shrewd-Forthright
O	*Guilt proneness*-Assurance	Apprehensive-Placid
Q1	*Radicalism*-Conservatism	Liberalism-Conservatism
Q2	*Self-sufficiency*--Group adherence	-- same
Q3	*High self-concept control* -- Low integration	Controlled--Undisciplined self-concept
Q4	Ergic tension (*High*-Low)	Tense-Relaxed

(Cattell, 1970, *passim*, Chapter 9)

TABLE II

Cattell's Second Order Factors

Factor	Bipolar Title	Major Primaries
QI	Invia-*Exvia*	A+,E+,F+,H+,Q2-
QII	Adjustment-*Anxiety*	C-,H-,L+,O+,Q3-,Q4+
QIII	Parthemia-*Cortertia*	A-,I-,M-,(E+,L+)
QIV	Subduedness-*Independence*	E+,L+,M+,Q1+,Q2+
QV	Naturalness-*Discreetness*	N+,(A+,M-,O-)
QVI	Cool Realism-*Prodigal Subjectivity*	I+,M+,L-
QVII	Low Intelligence-*High Intelligence*	B+
QVIII	Low superego strength-*High superego strength*	G+,Q3+,F-

(Cattell, 1970, p. 116)

N.B. In both Tables the italicized polar term is the direction of high (positive) scoring on the 16PF Test.

The two secondary source traits (QIII & QV) have different loadings for women (in parentheses) in addition to the others shared with men.

number of both primary and secondary source traits. Rorer (1972), for instance, has estimated the number of primaries as varying from sixteen to twenty-eight -- the number of secondaries he suggests ranges from eight to sixteen. All of which provides more input to the debate as to whether Cattell is [illegible]tified in suggesting that the 16PF is the definitive personality assessment instrument.

The second-order factors are obtained by factor analysis of the primaries. They are "organizers of primary factors, just as primary factors are organizers of specific pieces of behaviour" (Cattell, 1966, p. 117). Obviously, the second- or higher-order factors are much broader in their influence than the primary factors. They account for a larger proportion of the variance among individuals.

As an interesting aside, the two second-order factors (QI and QII) show considerable similarity to Eysenck's major personality 'traits' of Neuroticism-Stability and Introversion-Extraversion. Eysenck (1952b; 1953) regards these as 'primary' factors in that they are orthogonal, thus differing from Cattell's primaries and secondaries which are correlated. The relationship between neuroticism and anxiety, and between stability and adjustment seems perfectly clear.

CRITIQUE AND EVALUATION OF CATTELL'S CONTRIBUTION TO PERSONALITY MEASUREMENT AND DESCRIPTION

Personality, as a field of psychological endeavour, has almost as many interpretations as there are investigators (Allport, G.W., 1937, *passim* chapter II). Numerous theories exist as to the exact nature of man, both from a clinical or intuitive (introspective) framework and from a scientific (objective) perspective. The 'real' man is viewed, by the former, as hiding behind a mask, and may only be comprehended by lifting this mask by some technique like introspection. Concomitant to this proposition, is the realization of concocted and mystical 'inner-forces' guiding and giving impetus to man's actions -- man is allegedly given control over these forces by the contrivance called 'free-will'. This particular interpretation is usually referred to as a subjective, intuitive one.

On the other hand, there is the personality theorist who prefers the approach termed 'objective', or 'scientific'. The deterministic personality theorist, for that is what such a person may be called, views man in much the same way he views other naturalistic phenomena, as falling under the influence of the laws of causation. That is to say, the way to obtain knowledge appertaining to man's personality is to adopt the methodology and concomitant philosophy of science.

It appears, on the face of it, that the issue is two-sided, scientific versus non-scientific. But this is not quite an accurate description. In point of fact, the 'scientific' approach of Raymond Cattell, whilst objective, is nevertheless hardly scientific, in the strict sense of the word. But more of this shortly.

Personality is, of course, given a definition (however tenuous) by all who study it. But the position chosen depends on the orientation of the theorist, and reflects his particular tradition. 'Tradition' here refers to a neutral historical orientation, and not as a euphemism for 'old-fashioned'. The main emphasis of this discussion, however, is not to pursue this polemic, but rather to examine the explanation of personality advanced by Raymond Cattell.

Cattell is to be thought of as a methodological behaviourist, who seeks to examine personality from an objective frame of reference. Coupled with this orientation is, however, a strong inclination to use, and believe in, the terminology and formulations of the psychoanalyst. Cattell's theory of personality is in part descriptive and structural, and in part functional. Not only does he describe traits, types and syndromes (of which personality is the all-embracing set), but he claims that his system enables us to predict and control human behaviour. Herein lies a serious fallacy. This centres around Cattell's use of the term 'prediction' which, for him, has connotations of the probability of an 'effect' following a 'cause'. This is in contrast to the strict scientific meaning of 'prediction', which claims an absolute certainty that a 'cause' is followed by a defined 'effect'.

The argument that Cattell's formulation enables 'prediction' is at best wishful-thinking. The basic paradigm Cattell uses is rooted in correlational techniques. As such it allows for events to be related only by a 'correlational coefficient'. Take, for example, the hypothetical situation of social class and intelligence. Investigation yields a positive correlation between these variables. The logical question which arises can be stated in the form: Is social class the cause of intelligence? or is intelligence the cause of social class? The answer is, from the data given, unknowable and must remain forever obfuscated. An alternative explanation is that both variables, intelligence and social class, may be functionally related to some other variable. In fact, as Skinner points out, correlational techniques do not of themselves provide explanations of causation in behaviour: "The prediction is not from cause to effect, but from one effect to another" (Skinner, 1953, p. 199). This precise point was also advanced by John Stuart Mill in his exhaustive work - A System of Logic (1846). Mill points out, in his 'Fifth Canon', the fallacy of using this technique (correlation) for establishing causal relations.

In agreement with many personality theorists, for example Freud, who postulates the existence of inner-psychic activity and intra-psychic processes as the sole determinants of personality, and consequently behaviour, Cattell proposes that personality is in part a function of 'under the skin' variables. Cattell does not limit his explanation of behaviour just to psychoanalytic constructs: he places equal weight on the 'situation' (environment) as a factor in shaping behaviour. This is concisely formulated as: $R = f(S,P)$, where 'R' is the behavioural response; 'S' the stimulus situation; and 'P' the nature of the individual's personality (Cattell, 1966, p. 25). This is remarkably akin to Lewin's formulation which preceded it by some thirty or so years.

In contradistinction to theorists such as Freud, Cattell focuses on psychometric devices and instruments (rather than Freudian single case-histories) to aid him in constructing his general principles of personality. But, to re-emphasize a point, Cattell and his contemporary psychometricians are paddling the canoe of probability up the proverbial 'creek'. Their work, however, meticulous and painstaking, cannot be described as scientific. It is not in line with the major assumptions of a science of human behaviour.

Cattell's systematic approach to personality has been outlined and examined critically. And even though his theoretical structure rests on a somewhat shaky foundation, his test does have merit, and is possibly amongst the 'best' available at this point in time. Furthermore, the 16PF test is used because we are not interested, in this experiment at least, in determining an absolute personality-position for an individual, but rather in assessing movement from pre- to post-treatment. The interest we have in the 16PF and MMPI is that they provide a list of questions the answers to which can be regarded as objective data. They should enable the investigator to discover what 'learning' occurs as a direct result of small group psychotherapy.

(b) Hathaway and McKinley and the Minnesota Multiphastic Personality Inventory

The authors of this test seem to have little or no theoretical position with respect to personality, save that they believe in a modified trait theory. Their 'theory' and procedures are said to be based on clinical practice and intuition. Paradoxically, the MMPI is a test born of a circular argument. That is to say, clinicians diagnosed a pathological condition (trait or syndrome); the diagnosed patient was then behaviourally categorized and answered the list of questions in a certain way; these answers were, in turn, employed as criteria for judging others as having, or not having, these same traits or syndrome. In sum, this means that the diagnosed trait in a particular patient has no external referent. In other words, it is by no means certain whether or not in reality these questions may be used to judge a person as having this or that trait, or indeed whether they contribute to our understanding of this person's personality structure. But, in fairness to the MMPI, this is a criticism of all the tests in this area, including the 16PF.

Hathaway and McKinley (1967) also claim that their test provides an "objective assessment of some of the major personality characteristics thataffect personal and social adjustment" (Handbook, p. 7). As previously mentioned, the MMPI was developed originally to assess and classify the pathological disorders commonly encountered in the psychiatric clinic. Ten scales were constructed, and named for the pathological condition on which their development was based. The scales do not correspond to 'pure' traits (as do the 16PF scales). Nor do they stand for discrete aetiological or prognostic entities. More precisely, they may perhaps be likened to Cattell's surface traits (Cattell, 1966b).

The construction of the test is covered in great detail by Welsh and Dahlstrom (1956, pp.58-123) in the collection of readings they have edited, and so will not be covered in any depth here. Suffice it to say that the MMPI is rooted in the concept that any and all questions (within the limits of psychology and psychiatric practice, of course) will undoubtedly contribute to, and form, many potential 'factors' of personality. Again, this test is not to be used for assessment of an absolute position with regard to the personality of the subjects, but simply to provide a yardstick of change over the course of the treatment. The ten scales of the MMPI currently in use are itemised in Table III. An outline of the statistical properties, format and administration of the MMPI is given in Chapter III.

As shown, these scales cover hypochondriasis, depression, hysteria, psychopathic deviancy, masculininty-femininity, paranoia, psychasthenia, schizophrenia, hypomania, and social introversion.

TABLE III

The Ten Scales of the MMPI

Abbreviation	Scale Title	
Hs	Hypochondriasis	The so-called neurotic triad
D	Depression	
Hy	Hysteria	
Pd	Psychopathic Deviate	
Mf	Masculinity-Femininity	
Pa	Paranoia	
Pt	Psychasthenia	-- thinking characterized by excessive doubt, compulsions, obsessions and unreasonable fears
Sc	Schizophrenia	
Ma	Hypomania	-- a milder degree of manic excitement
Si	Social Introversion	

(Hathaway and McKinley, 1957, p.8).

EMOTION: PAST AND CURRENT CONCEPTIONS OF ITS NATURE AND ASSESSMENT

Introduction

The legacy of Graeco-Roman thought is nowhere more clearly observed than in the social sciences, especially in the behavioural science of psychology (Esper, 1964). Plato, in the Republic was perhaps responsible for the first classification of human behaviour into the familiar trichotomy of cognition, affect and conation (volition). Esper points this out when he suggects that:

> "Plato, ... , adopted the Orphic-Pythagorean psycho-physical dualism. The individual human soul consists of three parts: the rational or thinking soul has its seat in the head and is immortal and divine, whereas courage and sensual desires reside in the chest and belly, respectively, and are mortal."
>
> (1964, p.78)

Man, in the Platonic sense, therefore, is moved to action (behaviour) by his intellect, reason, or sense; secondly, by his emotional state or sensibility ('courage'); finally, by his 'will' or 'appetite' ('sensual'). Such states, 'souls' or 'desires' as these do not refer to distinct, tangible entities, nor yet to three discrete processes. Rather they are conceptualized by dualists such as Plato as in dynamic interaction. Cognitive processes (for example, thinking and reasoning) are frequently coloured (or is it discoloured?) by emotions. The amorphous and elusive nature of this interaction poses a problem not only for the layman in his work-a-day world, and for the teacher in the classroom, but also for the social scientist actively engaged in attempting to distinguish between such phenomena. Additionally, for the research worker, it is imperative to tease out, and differentiate between, the many and diverse emotions.

It is intended, in this study, systematically to develop a scheme whereby 'affect' is isolated and operationally defined in terms of verbal behaviour. In particular, 'affect' must be clearly and precisely differentiated from 'cognition'. Criteria for distinguishing between the two states have been the subject matter for innumerable theorists through the ages. In this case, however, criteria have evolved from a close scrutiny of the literature on affect coupled with a preliminary survey of the data. Consideration of the various systems for analyzing small group behaviour has also been helpful. We would single out Bales' Interaction Process Analysis (1970), Flanders' Interaction Analysis in the Classroon (1966) and Ekman, Friesen and Ellsworth's Facial Affect Scoring Technique (1972). An excellent, although biased, survey of the field of affective psychology is provided by Izard (1971) and also by Plutchik (1962).

Historical Perspective

To 'set the stage' for the operational definitions of emotion and the emotions, it is necessary to sift through the literature. It is hoped, in this brief survey, to provide answers to certain basic questions. For instance, what is the difference between the three terms 'feeling', 'affect', and 'emotion'? Is a particular sequence of the events 'perception','organic reaction', and 'emotion' more adequate (correct) than another? etc.

The customary psychological division of emotion into "internal" feeling or affective states and behavioural expression (emotional behaviour) reflects, for the most part, the basic dualistic position of a considerable number of psychologists. Speaking from the Behaviouristic position, it is imperative to concentrate on observable events, that is, on public events. It is conceded that private events occur, and that they have a correlate in the domain of public events and are under the functional control of similar contingencies of reinforcement (see Skinner,1953, Chapter 17). This study, therefore, takes its starting point as the Law of Parsimony: that "internal", private events or other inexplicable fictions are irrelevant and superfluous to the present study. The three terms, affect,feeling and emotion, have conotations of internal states, and in order to eliminate any confusion they will be used as synonyms.

Generally speaking, the study of emotions has three aspects: (a) subjective feeling states -- introspection; (b) overt behavioural expression; and (c) physiological or neurological aspects (Plutchik, 1962). Moreover, the majority of theories concerning emotion address themselves to one or other of these aspects. As previously mentioned, the intention of this writer is to concentrate exclusively on affect as in (b) above; that is, affect which is determined by certain rules, regulations and operational definitions, from the overt, verbal behaviour of the subject. Skinner (1957) uses the term verbal in a special sense, and it embraces both vocal and non-vocal behaviour. Vocal behaviour consists of all voice utterances and includes the spoken language and sub-vocalizations such as 'uh-huh', 'ouch', 'ah', etc. Non-vocal behaviour, on the other hand, includes such behaviours as head-nodding, eye-winking, shoulder-shrugging, hand-gestures and so on. In a word, verbal behaviour is any act which is communicative in some way or another.

An exhaustive survey of the historical developments concerning the theory of emotion has been provided by Gardiner, et al (1937). Without belabouring the point, they provide us with insights into the evolution of the 'Classical' and 'James-Lange' theories. William James, and later the Danish physiologist Carl Lange, supplied the counter-proposal to the sequence of events contained in the Classical theory. In a nutshell, such theories pose an enigma: Do we run away (organic reaction) because we are afraid (emotion) (classical theory)? Or are we afraid because we run away (James-Lange Theory)?

It came as quite a surprise to the academic community of 1884 when James stated:

> "Our natural way of thinking about these standard emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression. My thesis on the contrary is that the bodily changes follow directly the PERCEPTION of the exciting fact, and that our feeling of the same changes as they occur IS the emotion. (James, 1884, pp. 189-190)

The controversy surrounding the issue of the James-Lange versus the Classical theory, in the sense of the sequence of events, involved a number of distinct but interrelated problems. In the first instance, the overwhelming weight of evidence (Izard, 1971;

Plutchik, 1962; Arnold, 1960; etc.) indicates that, with respect to sequence, the controversy rages around an untestable hypothesis. In point of fact, neither explanation is scientific: they both rest on mere conjecture based on logic, philosophy, and metaphysics. This assertion is substantiated by Golightly's (1953) 'logical post-mortem' on the James-Lange theory. Here he suggests that James was attempting to "consolidate and simplify the conceptual apparatus of nineteenth century introspective psychology" (p. 287).

Other problems in the controversy include the following: (a) what causes emotion? (b) how do we determine a criterion for defining emotion? and (c) the perennial question of psycho-physical dualisms: how are bodily process and psychic state "connected"? Needless to say, these are matters of passing interest here, with the exception of (b). This requires an operational definition.

According to Golightly (1953) the philosophical questions posed by James were later changed to empirical scientific ones as follows: Is the cause of emotion (a) a visceral or vascular event (James-Lange), or (b) a brain event (Cannon, 1927, 1929)? If the former proposition is affirmed, then one adheres to the Peripheral Theory; if the second is chosen, then one supports the Central Theory. In the course of events, the physiologist Cannon, who first proposed the Central Theory, claimed that his neurophysiological data showed that:

> "(a) total separation of the viscera from the nervous system does not alter emotional behaviour, (b) the viscera are too slow and too insensitive to be a source of emotional feeling, (c) the same visceral changes occur in different emotional states and in nonemotional states, and (d) artificial induction of the visceral changes typical of emotions does not produce emotions." (Izard, 1971, pp. 117-118)

The notion of the thalamus as the seat of the emotions is absolutely central to Cannon's Theory (1927, 1929). He suggests that four distinct steps are involved in the emotional process. In the first place, external stimulation initially fires the receptors and generates impulses directed towards the cortex. Secondly, these impulses also excite thalamic processes. Thirdly, thalamic neurones act in a specific combination which results in a unique emotional expression and a unique quality of emotional experience. Finally, the thalamic discharge innervates muscles and viscera and excites afferent pathways to the cortex (see Izard, 1971).

The difference between James and Cannon is clear: 'heart' versus 'head'. James' stressed psycho-physical dualism, and the importance of the viscera and glands as determining the specificity of the different emotions; whereas Cannon believed that neuronal activity in the thalamus supplied the emotional quality to sensation.

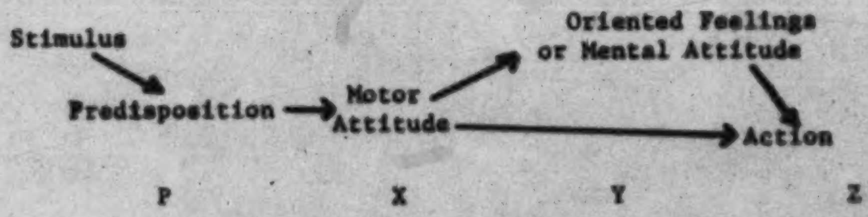
Numerous objections to Cannon's theories and empirical research have since been raised (Hebb, 1946, 1949; & Arnold, 1960). Hebb (1949) has declared that the whole debate on the James-Lange theory is "totally irrelevant", and is the "clearest evidence of the hold traditional ideas have on psychological thought" (p. 237).

As a final note on the early formulations regarding emotion, it is imperative to glance at the criterion used to determine what is emotion. The advocates of the neurophysiological Central Theory conferred credibility on their cause with statements (hypotheses) about hard experimental data; that is, observable physiological behaviour. James, on the other hand, refuted such statements with a wave of the magic-wand of introspection: he claimed that objective statements about neurophysiological events were not the same as statements made about subjective (introspective) feelings and experiences (Golightly, 1953). Such a dualistic, quasi-mystical approach to the study of human emotions was doomed to failure, especially in the wake of the Behaviourist tide: a movement dedicated to an explanation of all human behaviour in terms of the overt action and interaction of the environment and man.

The James-Lange theory was given a fillip in 1951 by Nina Bull. She proposed an additional variable ('attitude' or 'readiness') in the sequence, and supported its inclusion with experimental evidence obtained from hypnotized patients. Bull's theory may be conceptualized as in Figure 2.

FIGURE 2

Bull's Theory of the Sequence of Emotions



(Bull, 1951, p.9)

She explained her theory as follows:

> "For an understanding of the sequence in emotion the mental attitude, belonging in the conscious stage of readiness, must never be confused with an earlier unconscious stage of readiness which will here be called the latent attitude, or predisposition antecedent to the sequence X, Y, Z. ... It is this neural readiness which causes the individual to respond in a particular way to

> a particular stimulus (object or situation);while the mental attitude of conscious readiness depends on the initial step in the response -- that is, on X, the motor attitude. (Bull, 1951, p.9. -- her italics)

Bull's formulation was adumbrated by Claparède (1928) when he suggested the conceptual scheme for emotion as in Figure 3.

FIGURE 3

Claparède's Scheme for Emotional Sequences

"Classical Theory: Perception -- Emotion -- Organic Reactions.

James-Lange Theory:Perception -- Organic Reactions -- Emotions.

Modified Peripheral Theory: Perception -- Attitude (of flight), Feeling (of danger) -- Organic Reactions -- Emotion (fear).

Flight without Emotion: Perception -- Attitude (of flight),Feeling (of danger) -- Flight."

(Claparède,1928,p.133)

The original contribution of Bull lay in suggesting that the perception is composed of a predisposition which may, or may not, be regarded as a conditioned reflex in the Pavlovian sense. In point of fact, Skinner (1953) also seems willing to accept the concept of emotion as a type of 'hypothetical state' which corresponds to a disposition to act in a particular way. Bull was unfortunately concerned with the basic problem of sequence, and added little to an objective definition of emotion, or even to our understanding of the problem.

As a final note on the sequence debate, it is imperative to reiterate that James' original statement in 1884 stands as a cornerstone for modern affective psychology. It is not for its emphasis on sequence and dualism, but rather for its tendentious quality in advocating the idea of 'discrete emotions'. James' taxonomy was somewhat askew. For instance, he placed "surprise, curiosity, rapture, fear, anger, lust, greed, and the like" into one category ("standard emotions") (1884, p. 189). Of course, James was merely restating what such philosophers as Descartes, Spinoza and Hobbes had proposed earlier.

William McDougall (1908), a contemporary of James, was perhaps the instigator, in psychology at least, of the recurrent problem within modern affective psychology. This is the question as to which emotions are primary, and which secondary or complex. The latter he said were compounded (and here he was borrowing from the Scottish philosopher, Thomas Brown) from the primary emotions. These in turn are inseparably linked by McDougall with the "essential springs or motive powers of all thought and action", the so-called innate or inherited tendencies.

McDougall, following Kant, placed great emphasis on the three fold division of mental process:- the cognitive, affective and conative. His preoccupation with this classification is epitomized in the statement: "every instance of instinctive behaviour involves a knowing of some thing or object, a feeling in regard to it, and a striving towards or away from that object" (1908, p. 23). This serves as a pointer towards a partial answer to the perennial question: 'Are emotion and cognition different?' In support of the difference between them, McDougall had the following to say: "that emotion as a fact of consciousness may properly be distinguished from the cognitive process which it accompanies and qualifies is, I think, obvious and indisputable"

(1908, p. 42). This particular orientation is an anticipation of the notion of Harvey (1965), who conceptualized these "twin facets of behaviour as interdependent processes" (In Tomkins, et al, 1965, p.242).

McDougall's division of the instincts and their emotional correlates, is twelve-fold: seven important, clearly defined ones, and five more obscure, less differentiated ones (see Table IV).

Table IV

McDougall's Classification of the Instincts and their Emotional Correlates

Instinct	Emotional Correlate
Flight	Fear
Repulsion	Disgust
Curiosity	Wonder
Pugnacity	Anger
Self-abasement (Subjection)	Subjection (Negative Self-Feeling)
Self-assertion (Self-display)	Elation (Positive Self-Feeling
Parental	'Tender'

(McDougall, 1908, pp. 39-69)

The other five obscure instincts are (in order of decreasing importance) the reproductive instinct, one concerned with the desire for food, the gregarious instinct, the acquisitive instinct, and the construction instinct.

The secondary (complex) emotions posited by McDougall are compounded from the primary ones. For example, 'hate' is composed of anger, fear and disgust (p. 106); 'admiration' of wonder and negative self-feeling (p. 111); and 'awe' is a blend of admiration and fear (p. 113).

Modern Theories

The theoretical system of McDougall, which reminds one of Cattell's 'source trait -- surface trait' concept, is the forerunner of Plutchik's recent theory (1962). The notion of primary and secondary emotions, common to both, is in reality an academic 'red-herring'. It doesn't matter in the least how many distinctions we make between the emotions, but how we examine emotional behaviour. Skinner (1953) echoes this point when he suggests that the "proper subject matter of the study of emotion ... (is) ... the emotional behaviour and the manipulable conditions of which that behaviour is a function" (p. 167). The affect scoring technique which has been developed is a tentative first step towards the implementation of this suggestion. Suffice it to say, however, that a division of the emotions into categories is necessary because (a) they appear to be discrete behavioural entities, and (b) research investigations have customarily started from such a classification (see Table V).

The question which now arises is: what is emotional behaviour? The author has taken as a starting point the layman's definition of emotion. We all "know" in some way, what is meant by the statements: He is angry, she is frustrated, they are a happy couple, he is distressed by his father's death, and she was surprised to find her husband home. In point of fact, the problem,

TABLE V

Emotion Categories Proposed by Various Investigators

McDougall (1908)	Woodworth (1938)	Plutchik (1962)	Frijda (1968)	Ekman, Friesen & Ellsworth (1972)	O'Neil (1973)	
Elation (Positive Self-Feeling) Tender	Love Mirth Happiness	Coyness Happiness Joy	Happy	Happiness	1 POSITIVE: Pleasure, Warmth, Love, Elation, Tender, Friendly, and Surprise/Startle.	
Wonder	Surprise	Surprise Amazement Astonishment	Surprise	Surprise		
----	----	----	----	----	NEUTRAL: Objective 2	
Fear	Fear	Apprehension Fear Terror	Fear	Fear	3 ANXIETY-FEAR: Terror, Worry, Tension	NEGATIVE ....
Anger	Anger Determination	Annoyance Anger Rage	Anger	Anger	4 ANGER-HOSTILITY: Disgust, Hate, Rage, Contempt, Aggression	

TABLE V (Cont'd)

Emotion Categories Proposed by Various Investigators

McDougall (1908)	Woodworth (1938)	Plutchik (1962)	Frijda (1968)	Ekman, Friesen & Ellsworth (1972)	O'Neil (1973)	
Disgust	Disgust Contempt	Tiresome Disgust Loathing	Disgust	Disgust Contempt		..... NEGATIVE .....
Negative Self-Feeling	Suffering	Pensiveness Sorrow Grief	Sad	Sadness	FRUSTRATION-SORROW:[5] Disappointment, Dejection, Depression, Grief, Sadness, Guilt, Shame.	
——	——	——	Insecure Skepticism	——		
——	——	Attentiveness Expectancy Anticipation Acceptance Incorporation	Attention Calm Bitter Pride Irony	Interest		

(Adapted from Ekman, Friesen, and Ellsworth, 1972, pp.60-61).

according to Mandler (1962), is one of attempting to "list the sort of behaviours which we want to call emotional, assuming that we are talking about the same sort of things that people in general do when they talk about emotion" (p. 298). Table V presents a comparative survey of the various categories of emotion proposed by various investigators. The final column is the present attempt to classify emotional behaviour, indeed it encompasses all verbal behaviour in that a neutral (objective) category is included. The VAST system is described in detail in Chapter III.

As a final word on the meaning of 'emotional behaviour', attention must be drawn to the term 'behaviour'. This, as the "proper subject matter of a study of emotion", has two sides. These are, the observable activity of the organism; secondly, the fact that emotional behaviour seems to be concerned with an approach toward something good and the withdrawal from something bad. Arnold's statement on the latter is unequivocal:

> "Emotion ... (is) ... the felt tendency toward anything intuitively appraised as good (beneficial), or away from anything intuitively appraised as bad (harmful). (1960, p. 182)

Whilst not agreeing in toto with this definition, it does provide a starting point and gives insight into a possible behavioural definition. The following section is to be regarded as a movement towards an operational (behavioural) definition of emotion(s), as these are defined in Chapter III.

Category System: A Rationale

Man's behaviour can be characterized, for the most part, by an analysis of his vocalizations. This constitutes the raw data, so to speak, of psychological and psychiatric research. In regard to the therapeutic value of encounter and psychotherapy groups, it is the analysis of verbal output, in some form or another, which provides the criterion of success or failure. A basic fact about man's pattern of vocalization (including speech and sub-vocalizations) is that it is given by the syntax, grammar and intonation of his particular idiomatic communication. Notwithstanding this, it is also fair to assume that valuable information about his personality and his current emotional state can be obtained from the individual's choice of words, themes, idiosyncratic styles of vocalization and intonations.

This information can provide the practising psychiatrist, therapist, or group-trainer with a wealth of information with regard to the client's malady. In the main, however, the cues and clues provided by such verbal report are not systematically collected nor exhaustively examined. Normally, they are subjectively selected from the patient's output and unsystematically evaluated.

The major emphasis of this category scheme, therefore, is in its systematic and objective study of verbal behaviour (that is, themes and words used), coupled with its examination of voice intonation. The scheme is systematic in that a two-dimensional matrix is employed to investigate verbal behaviour - that is to say, categories have been devised into which the emotional component of _all_ verbal behaviour may be "pigeon-holed", according to theme discussed. These are operationally defined. It is systematic because the act _qua_ act is specifically delineated so as to leave little room for error in interpretation. The scheme is objective, as was pointed out earlier, in that the observer is one step removed from the on-going verbal interaction and the concomitant emotional reverberations. The observer is advantageously placed to be detached, uninvolved and 'unbiased' in his evaluation.

The term 'unbiased' is perhaps misleading: it doesn't mean that the observer is without error in his judgements, merely that he is consistently 'biased' in one direction or another. Suppose, for example, that the observer makes an error in judging the reality of the emotional climate at any one instance - that is, judging 'frustration' (Category #5) to be present when in reality it is absent. Then his data on a pre- to post-measure test or interview may still be upheld as valid. The error should be eliminated by the subtraction of the first measurement (frustration I plus error) from the second measurement (frustration II plus error). Thus the picture which emerges is valid and closely approximates the reality of either affect change or affect stability. In a nutshell, it is movement which is being assessed, not an absolute position on a scale.

The coding system enables the observer to make three statements about clinical interviews and the client interviewed: first, the alteration in the emotional state; second, the change in themes; finally, the interaction effect (if any) between the interviewer and interviewee.

The clinical interview, as a tool for investigating changes resulting from group psychotherapy, is often used. But it is seldom scrutinized in a systematic fashion as is done here. Generally, the investigators place a heavy reliance on anecdotal or testimonial-type evidence (for example, see Argyris, 1962 and 1964) and come away with a global, often meaningless, impression. The coding system presented here is a first step in the attempt to elicit material tending to support the claims as to the benefits of group psychotherapy, if these are to be found.

Plutchik (1962) puts forward five criteria for the primary emotions, which indicate his behaviouristic orientation. Paramount to the position adopted here is Plutchik's suggestion that if emotions are to be considered primary they should "be defined primarily in terms of behavioural data" (p. 56). It is felt that if the notion of primary emotion were disposed of, and this definition extended to encompass all emotions, then the field of affective psychology might find itself in a favourable position! This working definition has been accepted, and the outline of the emotion categories drawn up with this in mind.

Bales' Interaction Process Analysis

The Bales' IPA system provided the initial foundation of the Verbal Affect Scoring Technique, in that as a coding system it is far superior to its contemporaries, with the notable exception of Martin's (1973) Skinnerian System. The VAST system is indebted to Bales' IPA because it relies on (a) the Balesian definition of an act; (b) the IPA classification of communicative behaviour into positive, neutral and negative affect areas; and (c) the IPA behavioural definitions of positive and negative affect. Consequently, the brief summary of Bales' IPA provided below is a necessary adjunct to the literature on emotion because it, too, contributed to the formulation and development of the VAST system. An exhaustive account of Bales' IPA is provided by Bales (1950, 1968, 1970) and by Matheson (1971).

In the 1950's Robert F. Bales and his co-workers concentrated their efforts on the study of change in small groups; that is, the development of roles and also phase movements. His major contribution is an observational scheme referred to as an 'Interaction Process Analysis' (IPA). The IPA was primarily used as:

> "... an observational method for the study of the social and emotional behaviour of individuals in small groups - their approach to problem solving, their roles and status structure and changes in these over time."
> (Bales, 1968, p. 456)

Bales thought that the group confronts four major problems (1968, p. 459), which it attempts to overcome in the course of its development. These problems are, respectively, adaptation to factors outside the group, and which influence it, (e.g. control by a larger organization of which the group is a sub-set); instrumental control over those things in the group which are relevant to performing its task (e.g. assigning tasks, making decisions or carrying out activities); the expression and management of feelings of the members (e.g. expressing pleasure or dissatisfaction, or relieving tensions); and the development and maintenance of integration of the members with each other and of the group as a whole (e.g. willingness to do things, or a sense of comradeship).

The problems of adaptation and instrumental control are resolved by the employment of questions and answers (Bales' categories 4 to 9, inclusive). Opinions, information and suggestions are both asked for and given, as the group members attempt to orientate themselves to the task. The problems of expression and control of feelings, and the integration of members into the group are dealt with by the expression of positive and negative reactions [Bales's categories 1 to 3 (inclusive) and 10 to 12 (inclusive), respectively]

Table VI provides a comprehensive outline of the twelve categories. Bales has found in his work at Harvard, and this has been corroborated independently by Matheson (1971), that the IPA system yields a systematic description of 'directions of social psychological movement' or personality 'types' and 'traits'. Matheson has further added that it is possible to classify individuals in a group "by an analysis of the pattern of group interaction in terms of one or other of these social psychological distinctions (s.p.d.'s)" (1971, p. 39). The three orthogonal axes which define that so-called three-dimensional psychological space are as follows:

1. Dominant-Submissive (Upward-Downward).

   Power Axis.

2. Arousing pleasant or unpleasant feelings in others (Positive-Negative).

   Affection Axis.

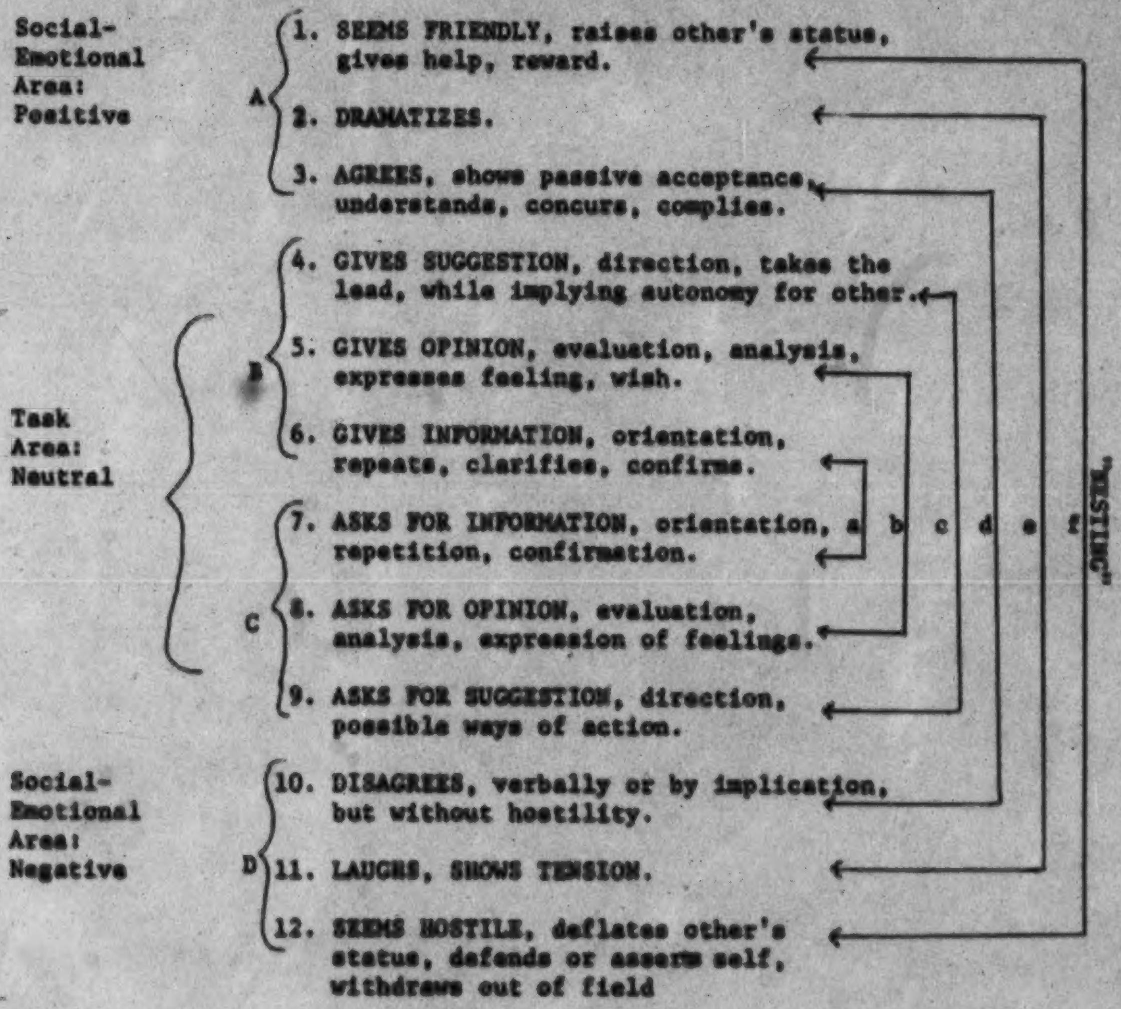
3. Accepting or Rejecting the group norms (Forward-Backward).

   Task Axis.

These are pictorially represented in Figure 4.

TABLE VI

The Analysis of Behaviour: Bales' System



Social-Emotional Area: Positive

1. SEEMS FRIENDLY, raises other's status, gives help, reward.
2. DRAMATIZES.
3. AGREES, shows passive acceptance, understands, concurs, complies.

Task Area: Neutral

4. GIVES SUGGESTION, direction, takes the lead, while implying autonomy for other.
5. GIVES OPINION, evaluation, analysis, expresses feeling, wish.
6. GIVES INFORMATION, orientation, repeats, clarifies, confirms.
7. ASKS FOR INFORMATION, orientation, repetition, confirmation.
8. ASKS FOR OPINION, evaluation, analysis, expression of feelings.
9. ASKS FOR SUGGESTION, direction, possible ways of action.

Social-Emotional Area: Negative

10. DISAGREES, verbally or by implication, but without hostility.
11. LAUGHS, SHOWS TENSION.
12. SEEMS HOSTILE, deflates other's status, defends or asserts self, withdraws out of field

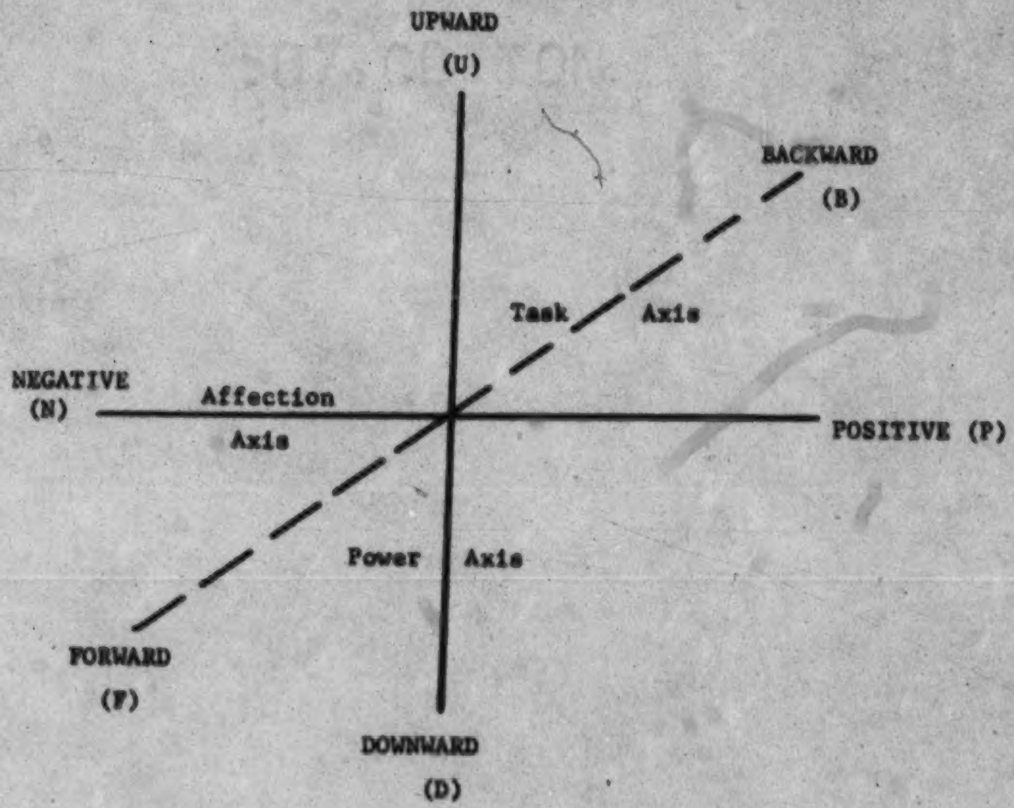
Key

A. Positive Reactions	a. Problems of Communication
B. Attempted Answers	b. Problems of Evaluation
C. Questions	c. Problems of Control
D. Negative Reactions	d. Problems of Decision
	e. Problems of Tension Reduction
	f. Problems of Reintegration

(Bales & Strodtbeck, 1951, p. 486: and Matheson, 1971, p.36)

FIGURE 4

Bales' Three-Dimensional Axes


UPWARD
(U)
BACKWARD
(B)
Task
Axis
NEGATIVE
(N)
Affection
Axis
POSITIVE (P)
Power
Axis
FORWARD
(F)
DOWNWARD
(D)

It is conceptually possible to imagine the Balesian space as a block or cube with 27 possible spatial positions, occupied either by specific individuals at a given time, or by one person at different times. These positions are the personality types described at great length by Bales (1970), and include such as UPF, DNB, etc. The person who, perhaps, falls in the DNB position, for example, is said to have little power in the group, arouses negative feelings in others, and appears to be anti-task.

It is apparent therefore that Bales has tackled the problem of role-differentiation within the on-going group dynamic, especially in the light of the movement on this theme - dimensional model of group members over time. In 1951, Bales and Strodtbeck examined the question of phases in groups involved with problem-solving. They found that:

> "... groups tend to move in their interaction from a relative emphasis upon problems of orientation, to problems of evaluation, and subsequently to problems of control, and that concurrent with these transitions, the relative frequency of both negative and positive reactions tend to increase." (1951, pp. 485-6).

In conclusion, suffice it to say that Bales and his fellow workers have made important contributions to the available knowledge of group dynamics from the perceptive of both phase movements and role-differentiation. They have shown that phase movements exist both over sessions and within sessions. Moreover, that as a direct consequence of phase movements, certain roles emerge, which are attended to in overt behaviours just as task activities are.

CHAPTER III

METHODOLOGY: DESIGN, DATA COLLECTION, TEST INSTRUMENTS AND A STATEMENT OF THE PROBLEM

The present research study is part of a wider project which is directed by Dr. John McLeish. A team of graduate students is currently involved with this comprehensive project. The study concerns itself with various aspects of group processes, group behaviour and learning outcomes. At the time of writing, four major themes are being studied: the attempt to evaluate Skinner's learning principles in small group behaviour; the analysis of fantasy themes in these small learning groups; an investigation of Freudian defence mechanisms from the point of view of learning theory; and the present study.

Research Design

This particular experiment was conducted in April, 1972, and was carried out on two dissimilar psychotherapy groups. Psychiatric out-patients (voluntary patients) from a local hospital, the Royal Alexandra Hospital in Edmonton, were randomly assigned to one or another of the groups. One group received what we call a group-analytic treatment, primarily based on the model used in group psychotherapy at the Tavistock Clinic, London. This will be referred to as GAT in following matter. The second group was given a form of "Gestalt" therapy (GT). A brief description of these two group treatments will be given shortly.

The patients were assigned to the treatments as shown in Table VII.

TABLE VII

Composition of the Two Therapies

GAT		GT	
Males :	N = 2	Males:	N = 1
Females :	N = 6	Females:	N = 6
Therapist:	N = 1	Therapist:	N = 1

The treatments ran for four consecutive weeks. Each group session lasted for one hour exactly on weekday evenings (i.e. Monday through Friday). The therapeutic encounter, therefore, was exactly twenty contact-hours. Two patients in the GAT group did not survive the therapy: one did not return after the first session, and the other came for only three of the sessions. In actual fact, the last session of the GAT group only ran for ten minutes since only two of the remaining six showed-up. Attendance, aside from the above exceptions, was of the order of 95%.

Data Collection and Preparation

The two groups were tested before and after the therapies with two tests of personality: the Sixteen Personality Factor Questionnaire - 16PF (1967 Edition, Form A); and the Minnesota Multiphasic Personality Inventory (MMPI). Additionally, a pre- and post-treatment clinical interview was conducted. The reader is referred to the 16PF and MMPI Test Booklets. A list of the topics discussed in the clinical interview is provided in Appendix D.

All sessions of the two treatments were video-taped, and transcripts were made from these. The clinical interviews were audio-taped, and a transcript made of one session.

The preparation of the data made allowance for the fact that the personality tests were to be scrutinized by comparison of pre- to post-treatment results using the t-statistic. The analysis of the data of the personality tests included an investigation of group and individual changes as well as an item (question) analysis (see Chapter IV). The clinical interviews were subjected to analysis, in random order, employing the VAST coding system devised by the author. This scheme was an attempt to classify the emotions and themes generated in the pre- and post-therapy interviews. The clinical interviews were scrutinized for (i) individual, and (ii) group movements. Attention was given, in the VAST evaluation, to interviewer - interviewee interaction effects. A scoring sheet (Appendix E) was prepared so that the "acts" (emotion and theme) could be tallied quickly and efficiently. The twenty-six taped interviews were coded and the data analyzed.

Test Instruments

(a) The Sixteen Personality Factor Questionnaire

This test is part of a battery of personality tests originating from the theoretical work of Raymond Cattell, and currently one of the IPAT (Illinois) instruments. It is used for adult members of the population (aged sixteen years and above) who are literate at the level of the average newspaper. It purports to assess most of the important dimensions of personality. The author claims that the test measures functional or 'source' traits, as opposed to the arbitrary, or subjective surface traits measured by other tests on the market. The 16PF began in the world of everyday description and has been refined by means of factor analysis to reflect the world of oblique (correlated) factors. Thus, it is asserted that the major dimensions of 'personality'are determined by this test, both 'primary' and 'secondary' source traits being revealed. Cattell derived twelve of the factors from both questionnaire studies and ratings. The other four were found in the questionnaire domain alone. The sixteen primary factors and eight secondaries are found on page 14 of Chapter II (Tables I and II).

The test is administered either in a group or individual setting, and normally takes 45 to 60 minutes. The results are determined by a simple scoring method, and the raw scores are transformed to 'standard ten' (sten) scores. The profiles for all clients (Pre- and Post-therapy) are given in Appendix C.

The standardization sample was drawn from the total USA population, and approximates the population distribution with regard to area representation, population densities, age groups and family income groups (Norms are also available for the following countries: Britain, Australia, New Zealand and Japan). Within North America, separate norms for male and female populations exist.

The reliability of the test is satisfactory. The corrected split-half reliabilities for the Form used in this experiment (Form A: 1967-68 Edition) range from 0.54 to 0.89. The test-retest reliabilities over four to seven days range from 0.58 to 0.84, and over a two month interval from 0.63 to 0.88 (Cattell, et al. 1970). Reliability figures for the test, obtained from this study, are presented in Table VIII. They were calculated on the pre- to post-treatment data using Pearson's product-moment correlation coefficient ("r").

TABLE VIII

Test-Retest Reliability of the 16PF Factors Derived from this sample (N = 12) over a One-Month Interval

FACTOR	RELIABILITY	FACTOR	RELIABILITY
A	0.73	L	0.48
B	0.79	M	0.40
C	0.81	N	0.68
E	0.68	O	0.78
F	0.72	Q1	0.83
G	0.75	Q2	0.57
H	0.76	Q3	0.82
I	0.50	Q4	0.67

According to the test manual every item has a demonstrated saturation with respect to each of the factors it sets out to measure, and each questionnaire factor corresponds to a primary personality factor found elsewhere (for example, in ratings in real-life situations). With respect to concept validity, the handbook (Cattell, et al, 1970) states that this ranges from 0.77 to 0.94.

(b) The Minnesota Multiphastic Personality Inventory

This test is designed to provide an "objective assessment of some of the major personality characteristics that affect personal and social adjustment" (Hathaway and McKinley, 1967). The authors believed that a multiphastic personality schedule might be constructed that would be of great value in the medical or psychiatric clinic. More varied subject matter was desirable to obtain a wider sampling of behaviour; there seemed to be a need for simpler wording and method of presentation.

The test contains 550 statements covering a wide range of subject material. Questions are asked of the testee which range from his physical condition to his morale and social attitudes. All questions may be answered as 'True', 'False' or 'Cannot Say'. The MMPI is rooted in the fact that the items form numerous potential scales; those initially chosen were the scales most easily obtained. The ten scales originally chosen appear in Chapter II (Table III, p.22). The MMPI is also provided with validating or control keys:

? Cannot say
L Lie
F Validity
K Correction (see later for discussion).

The test construction is discussed in detail by Welsh & Dahlstrom (1956) and will be omitted from this discussion. Suffice it to say that individual items on the inventory were formulated partly on the basis of previous clinic experience, partly from psychiatric examination forms and textbooks of psychiatry, as well as from earlier scales of personal and social attitudes developed by Hathaway & McKinley.

Subjects for standardisation and development of the scales were obtained from the Minneapolis Metropolitan area, and were approximately one-thousand normals, and two-hundred and fifty psychopathic in- and out-patients of the University of Minnesota Hospital. (For a detailed description of the development of each scale, item selection, standardization (see Welsh and Dahlstrom, 1956, p. 64f.).

The MMPI is a pencil-and-paper test, which is self-administered and usually takes an hour to complete. The 'normal' cautions should be adopted; that is, little advice, dictionary definitions of words not known, and instructions to testees to answer 'True' or 'False' in the majority of cases. Raw scores obtained for the ten scales, plus raw scores for the four validity scales, are transfered to a Profile and Case Summary Sheet (Male or Female).

The MMPI is provided with several correction or control keys intended to identify or make allowances for exceptional response styles; these are known as ?, L, F, and K.

> The ? score is the number of times the person replies "Cannot say". Excessive evasion of questions makes it meaningless to compare the subjects responses with the standardization group. Profiles showing high ? scores are recognized as invalid.
>
> The L (lie) score is based on a count of test items that are so worded that a person who denies having these symptoms is almost certainly not evaluating himself frankly. One example is "I sometimes put off until tomorrow what I ought to do today." A high L score indicates that the answers are untrustworthy but need not indicate deliberate lying. The L key detects some cases of "faking good" but it cannot be depended upon to detect faking by sophisticated subjects.

The F (false) score consists of responses given extremely rarely. A high F count reveals carelessness, misunderstanding or otherwise invalid answers. The F score tends to be high for subjects who attempt to fake bad record, because rare responses are usually unfavourable self-descriptions.

K, the fourth and most important control key was designed on an empirical basis. It was found, early in the test development, that some quite normal individuals earn scores about 70 in Hs, for example, because of what has been called "plus-getting" attitudes. These individuals reply with such complete frankness or self-depreciation that their response patterns appear abnormal. Among patients, on the other hand, there are a large number whose scores remain below 70 because of defensive denial of symptoms. So in order to reduce the number of such misses and false positives in MMPI diagnosis a key was made to measure defensiveness. The investigators identified items commonly marked by clinical cases whose profiles were less deviant than they should have been. The K key is composed of those items expressing a bland "all is well" facade, e.g. "I have very few quarrels with members of my family" (T) "Criticism or scolding hurts me terribly" (F).

The other control scores are used to signal untrustworthy profiles; the K scale is employed in a regression formula to correct the regular scales for test-taking attitudes. These corrected scales became the main keys for the test about 1946.

In scoring, therefore, after the raw scores have been obtained and transfererred to the Profile and Case Summary Sheet, a fraction of K is added to five of the scales, e.g. Hs becomes Hs plus .5K for a corrected score.

The relibility (test-retest) of the MMPI for the ten scales over one week ranges from 0.56 to 0.91; and over an interval of up to one year, from 0.57 to 0.83. The corresponding figures for the four validating scales are 0.75 to 0.93, and 0.46 to 0.76, respectively. Appendix A contains the test-retest reliability figures for this sample over a one month period. (Range: 0.82 to 0.99)

The statistics and specifications of the validity of the test are somewhat vague. The authors state: "As for validity, a high score on a scale has been found to predict positively the corresponding final clinical diagnosis or estimate in more than sixty percent of new psychiatric admissions." (Manual, 1967). But the circular argument implied in this has already been covered (Chapter II).

(c) The Verbal Affect Scoring Technique (VAST)

As was pointed out in Chapter II, this system has been carefully developed from a search of the literature, from closely related analytical schemes, and from a preliminary survey of the data. The scheme that follows, therefore, is experimental, and is by no means intended to be the definitive statement on the measurement of emotion. Table IX gives the outline of the system.

Definition of an Act

An act is defined as a single, unitary theme (content), with or without attached affect, which is expressed by the subject. The affect, when attached, may be positive (single category) or negative (three categories). The act may be verbal or sub-verbal; it may take the form of a single sentence, phrase, or single exclamation. In other words, it seems that the closest approximation to the Balesian act is sought (see Bales, 1950, 1968, and 1970).

Affect Categories: A Summary Discription

In the following matter, examples given are from the clinical interviews. Additional clarification of the affect categories is achieved by a more general list of examples: the type one would expect to be used by teachers-in-training, for example.

1. Positive Affect

In a word, this category approximates Bales' (1970) categories 1, 2 and 3, the so-called "social-emotional area: positive". A full account of these categories is found in Bales' 1950 book, but briefly they may be described as (1) seems friendly, raises other's status, gives help, reward; (2) dramatizes; and (3) agrees, shows passive acceptance, understands, concurs, complies. Additionally, certain words and phrases, intonations, and behaviours indicate that positive affect is being generated. For example, words such as happy, glad, enjoyment, relish, zest, gusto, well-being, joy, and so on, tend on the whole to indicate that the current emotion is positive.

Examples from the clinical interviews were few and far between, but when found included any sympathetic 'uh-huhs'; laughter (without tension relief); any agreements such as 'yeah', 'that's right' and 'exactly, sure' and so on. Comments such as "I don't know how the doctor could do it (therapy)" and "I was proud to go out

TABLE IX

Theme and Affect Categories and the Coding Matrix

AFFECT CATEGORIES	
Number	Description
1	**POSITIVE**: Pleasure, Warmth, Love, Joy, Elation, Tender, Friendly, Affection, Startle, Surprise, and Amazement.
2	**NEUTRAL**: Objective.
3	**ANXIETY-FEAR**: Terror, Worry, Distress, Tension, Being Scared, and Confusion.
4	**ANGER-HOSTILITY**: Disgust, Hate, Rage, Contempt, and Aggression.
5	**FRUSTRATION-SORROW**: Disappointment, Dejection, Depression, Grief, Sadness, Shame, and Guilt.

THEME CATEGORIES	
Letter	Description
A	Therapy
B	Self
C	Therapist
D	Group Peers
E	Marriage
F	Parents
G	Children
H	Work
I	Other People (Society in General)

These are coded in a matrix form as indicated below:

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4									
5									

with him" are included. Startle, surprise and amazement form part of this category.

2. Neutral: Objective

No apparent emotional content is present for coding in this category. The client speaks in a detached, unemotional way: that is, objectively. This category may appear to be a catch-all one; but, in actual fact, according to the rules of the coding system (see Appendix F), any affect which is decipherable is "pushed out" to the relevant category. By 'objective' is meant speaking on any theme in a cool, detached and realistic manner, with animation perhaps but devoid of emotional resonances.

Negative Affect Categories

The negative affect categories closely resemble Bales' Categories #10, 11 and 12, although the division is not the same. For instance, Bales (1950) places both 'anxiety' and 'frustration' in category #11.

3. Anxiety - Fear

This group of emotions is additionally composed of terror, worry, being scared, and distress.

The following words and phrases, when used by the client, are indicative of the 'anxiety-fear' category: 'frightened', 'afraid', 'feel-uneasy', 'in distress', and so on. On the other hand, the behaviours which indicate this category include 'voice quivering', 'stammering', 'hesitation', 'gulping', etc.

Examples from the interviews included sighing (with tension relief), and nervous coughing. Comments such as "I seem to be getting myself tied in knots", "It (work) bothers me a lot", "I'm very afraid of him", etc., are also included in this category.

4. Anger-Hostility

This category additionally encompasses disgust, contempt, hate, rage and aggression.

The following words and phrases illustrate this category: mad, indignant, furious, livid, disgusted, and so on. Additionally, certain behaviours would be coded here. For example, shouting, cursing, swearing and arguing.

Examples from the tapes include 'cutting across' or interrupting behaviour, and ridicule. Comments such as "There is no way that I'd seduce that creep (the therapist); "The sneaky bastard", "I wish I could kill him", "I'm still out to get him", "I make life miserable for him", and "I'm getting so that I hate it (work)", are all coded in Category #4.

5. Frustration-Sorrow

This category also includes disappointment, dejection, depression, grief, sadness, shame and guilt.

Words and phrases associated with this category include the following: feeling awful, depressed, troubled, feel like crying, unhappy, miserable, and so on. Frustration and depression are the major components of this category. Frustration is primarily defined as any act showing that the client has been thwarted from reaching some goal. Consequently, any act which shows that subject as disappointed, discontented, dissatisfied and displeased is coded here. Expressions of unhappiness, and indications that the client is downcast, downhearted, and miserable are also coded in category #5.

Examples from the interviews include "I'm a person who just can't cope", "He didn't understand me", "I was always happy-go-lucky before I got married", "Things have got increasingly worse", "That's what really bugs me", "I'm an insignificant, colourless, ordinary sort of person", "I don't excel in anything at all", "I just feel a failure", and so on.

Theme Categories: A Summary Description

The headings of these categories are sufficient explanations of the acts coded in them. Some need clarification, however. Included in Category A (Therapy) are references to previous therapies and therapists (pre-interview), and any reference to the interviewer (pre- and post-interviews). Categories C and D (Therapist and Group Peers) are only used in the post-interviews. Category E (Marriage) also encompasses boy-friends/ fiance/fiancee for un-married patients, and also includes extra-marital romances, and affairs. Category F (Parents) includes parents-in-law. Category H covers all matters pertaining to employment including university, industry and commerce.

In the final analysis of the data, the categories are collapsed into two broad dimensions: Primary and Secondary Affiliation. Here Categories B, E, F, and G are regarded as Primary, and A, C, D, H, and I as Secondary.

Reliability of the VAST Coding System

The inter-rater reliability of the VAST system was determined by Scott's π (pi) coefficient. The formula for π is as follows:

$$\pi = \frac{Po - Pe}{100 - Pe}$$

where 'Po' is the percentage of agreement; and 'Pe' is the percentage of agreement expected by chance which is found by squaring the proportion of tallies in each category, summing over all categories and dividing by 100. In other words, π is the amount that two raters exceed chance agreement divided by the amount that perfect agreement exceeds chance. Flanders (1966, pp. 13-17) provides a more detailed explanation of π , and a worked example.

In this case, the reliability was calculated from an analysis of one tape by two observers working independently. Approximately one-hour of interaction was coded, and this yielded about 400 "acts".

Scott's π coefficient was 0.80 for the total matrix; 0.87 for affect categories alone; and 0.84 for the theme categories alone. Flanders (1966) suggests that "a Scott coefficient of 0.85 or higher is a reasonable level of performance" (p. 17). (The full details of the calculations are in Appendix G.)

Description of the Two Group Treatments

Gestalt Treatment (GT)

A method as eclectic as this is difficult to describe definitively. The method, as used in this experiment, can be thought of as focusing-in on the 'here-and-now' situation, with guidance and control exercised by the therapist. The therapist therefore is a participant-cum-observer, who employs a diverse collection of techniques in his efforts to enable the patient to 'unfreeze, re-structure and re-freeze' his or her Gestalten, that is the perception (configuration) of 'reality'. The rationale is that a participant, as naive group-member, is coming for therapy because of some malady: amelioration is brought about by a change in the patient's modus operandi in coming to terms with the ailment. The therapist, then, uses the technique of drawing attention, in a dyadic-interactive manner, to the individual members' misconceptions, misconstructions and misperceptions of their own behaviour in relation to their interpretation of the behaviour of others. The therapist focuses on how other people's activity influences and regulates one's own behaviour, and, more important, how one's own emotions and cognitions modify and control one's own behaviour.

Frequently, the therapist concentrates on the affective domain, with cognitive activity down-played: intellectual and rationalizing behaviours are taboo! In this experiment the Gestalt therapist oftentimes attempted 'Transactional Analysis': a procedure for examining human communications in terms of the three levels - child, parent and adult. This, of course, bears great resemblance to Freud's model of the structure of personality. Berne (1964) was perhaps the 'creator' of this particular nomenclature. The analysis is basically concerned with determining which "ego state" (i.e. Child, Parent or Adult) is responsible for initiating (and returning) a particular human communication. The initiating behaviour is referred to as the "transactional stimulus" and the recipient's reply the "transactional response". Characteristics of the three "levels" of transactions are: (a) Child - "ego states which represent archaic relics, still-active ego states which were fixated in early childhood" (Berne, 1964, p. 23), and which may be likened to Freud's "id"; (b) Parental -

"ego states which resemble parental figures" (Ibid., p. 23), and which have a certain measure of authoritarianism - to be equated with Freud's "super-ego"; finally, (c) Adult - "ego states which are autonomously directed toward objective appraisal of reality" (Ibid.), and which may be similar to Freud's "ego".

Additionally, the therapist employed a method which the author has labelled the 'Hot Seat' technique. Here the patient is singled out to work through his or her malady by imagining that the root of their 'illness' is embedded in a maladjusted relationship with either parents or spouse. They were asked to imagine the cause of such a maladjustment was present in the treatment-room, and to "place" that person in an empty chair, to be talked to or shouted at. The patient brings to life, so to speak, the causes of the malady and the therapist, and to a limited extent the other group members, analyses the manifested, interactive-behaviours. The goal being primarily that the patient will re-adjust to a 'normal' life style.

Group Analytic Treatment: Tavistock Model (GAT)

> "This is a form of group psychoanalysis where the behaviour generated in the group is interpreted by the 'trainer' in terms of the myth of the 'primal horde', Oedipal conflicts and Freudian constructs in general. The latent content of behaviour should become clear to the participants as a result of the insights gained into their own emotional response to the trainer and his interpretations." (McLeish, et al., 1973, The Psychology of Learning Groups, p. 12)

Additionally, for the Tavistock treatment, ...

> ... "the attention of the group is focused on the 'here-and-now' situation with the task of observing and understanding behaviour as it happens. The trainer is a non-participant observer who 'reflects' back into the group

> the latent messages and group process ... he acts as a blank screen on which the members of the group can project their images of authority." (Ibid, p. 93)

The Problem

Outcomes Associated with Group Psychotherapy

In the introductory chapter reference was made to the claims and counterclaims of all those concerned with the efficacy of group psychotherapy in general, and specific therapies in particular. The aim of this short section is to analyze such claims, and to relate some of the current aims, objectives and assertions of practising therapists to recent outcomes studies. The major hypotheses are presented at the end.

Campbell and Dunnette (1968) claim that six major benefits are obtained from group training:

> "1) Increased self-insight or awareness concerning one's own behaviour and its meaning in a social context. ...
> 2) Increased sensitivity to the behaviour of others. ...
> 3) Increased awareness and understanding of the types of processes that facilitate or inhibit group functioning and the interactions between different groups. ...
> 4) Heightened diagnostic skill in social, interpersonal, and intergroup situations. ...
> 5) Increased action skill. ...
> 6) Learning how to learn. ..." (p. 75)

It is difficult to visualize how these may be assessed as they stand, except from an introspectionist framework. But some of them surely must be measureable, and certainly ought to be reflected in standard, objective measuring devices such as the 16PF, MMPI and the Verbal Affect System. Gibb (1971), on the other hand, suggests that training in groups is characterized by the following conditions:

> "1) Training has an explicit focus upon behaviour change. ...
> 2) Training places a focus upon the 'process' rather than upon the 'content' of group interaction. The central activity of training group is the analysis of persons *qua* persons and of process *qua* process. That is, groups focus upon the available interactions, leadership, feelings, structural patterns, perceptions, and other dynamics of the 'here-and-now'. ...
> 3) In training, there is usually a greater concern with affective and conative processes than with ideational processes. ..." (p. 841)

Again, if this is the case, then surely if persons and process are studied, and if feelings are the subject matter, it should materialise in the raw data of this study in particular, and outcome research in general. These claims in fact, are fairly typical of those put forward in recent papers. In short, no one really knows for sure what (if any) learning does take place and what (if any) is the direction of client change (Bergin, 1971; Gibb, 1971; Campbell & Dunnette, 1968; and McLeish, *et al*, 1973). The statement "practice has outrun not only theory but outcome research and validation as well" (McLeish, *et al*, 1973) is not only specific and cogent, but one to which our research energies should be channelled in order to rectify its damning implications. There is a world of difference between the aims and objectives (assertions), and the actual net outcome demonstrated by empirical studies. Until a stage is reached whereby definitive answers to the many questions concerning outcomes are forthcoming, the claims as to the efficacy of group psychotherapy must remain at the level of conjecture and speculation.

Bergin (1971) in reviewing a considerable number of outcomes studies (based on: *A Bibliography of Research in Psychotherapy* by Strupp & Bergin. Washington, D.C.: N.I.M.H., 1969) reached the conclusion that:

> "While the methodological sophistication and precision of studies have improved markedly, the evidence continues to yield the general conclusion that psychotherapy, on the average, has modestly positive effects". (p. 228)

He continues, and stresses the general problems in the majority of present studies which account for his conclusion. These include the following: (a) some experimenters use controls, others do not; (b) there is a general lack of precise statements about the nature of the therapy; (c) there is little examination of the limits of applicability of the therapy; (d) there is no investigation of whether specific consequences emerge from specific therapies; and (e) the fact that the data are often in the form of group averages.

Gibb (1971), in reviewing 106 outcome studies echoes Bergin's main criticism when he says that:

> "When compared with the standards of research in the psychological laboratory and with the desirability of definitive statements about the effects of training, the methodological impurities loom large, and the results are disappointingly equivocal." (p. 842)

All of this points, accusingly, at advocates of group therapy and training. It seems to indicate that, at best, group therapy may produce slight positive effects for some people, but it is also implied that there is a possible detrimental effect on others. Certainly, McLeish et al. (1973) seem justified in their conclusion that:

> "1) There is no reason to believe that groups actually increase interpersonal sensitivity to any significant degree.
> 2) There are no detectable changes in personality in any predictable direction.
> 3) There is no cogent evidence available at this point in time that groups are any more or less psychotherapeutic than other kinds of psychological treatments." (p. 182)

The message from all this is clear: the adoption of the null hypothesis as a working assumption with regard to personality and affect change and movement. One final point needs to be made with respect to outcomes. Research findings, not to speak of intuitive thoughts, indicate that certain individuals will undoubtably change. But it is hypothesized that such change will be (a) unsystematic and (b) not significant.

Re-statement of the Major Questions of the Thesis

Personality

What changes occur in the personality of the individuals? Is this systematic; that is, treatment specific? Or random?

Affect

What changes in the emotional behaviour of individuals will take place as a result of GT or GAT therapy? Will significant changes by individuals or by groups emerge?

Personality and Affect

The traits of personality reflect certain emotional states. Cattell, for instance, refers to 'temperament' traits (see Chapter II, pp. 12-13 for discussion). The question which arises is will the VAST system corroborate such anticipated personality change? The traits referred to are such as 'Anxiety' (16PF) and 'Depression" (MMPI).

CHAPTER IV

PERSONALITY CHANGE IN SMALL GROUPS: FACT OR FICTION?

The present study is composed of two essential parts: the evaluation of personality change as a direct result of exposure to two group treatments; and, secondly, the variations in emotional behaviour as exemplified in clinical interviews administered before and after the treatments. This chapter will examine the data for changes in personality structure, as measured by the 16PF and MMPI, of the patients who underwent the GAT and GT small group experience, respectively.

It has been pointed out (McLeish & Park, 1972; Park, 1971; and Campbell and Dunnette, 1968), that, in the short-term, little or no significant change in personality traits occurs as a result of small group psychotherapy, whatever the method. Therefore, experience, as well as the logic of empirical enquiry, suggests the null hypothesis as being appropriate: that no changes in personality structure are anticipated either in the individuals or as a result of the group treatments.

Preliminary Findings.

The data from the pre- and post-treatment test-battery (16PF and MMPI) were examined and analyzed, employing an analysis of variance statistical design. The group means for each variable of both tests were compared for significant changes using the t-statistic. The computer programme used was devised for the case of repeated measures -- this allows for the correlation between pre- and post-treatment scores. The significant results are summarised in Table X (Appendix B contains the detailed and comprehensive tables).

Surprisingly, each group evinced significant movements on one or more of the scales of the two tests. 'Surprisingly' is used deliberately, since previous research has alluded to the stability of the personality matrices. Furthermore, in the case of the GAT group especially, it seemed, in the opinion of the trained observers, that the discovered significant changes were in the opposite direction to what had been intuitively expected. The group-analytic treatment seems *prima facie* to be classified and descriptively defined as an experience which fosters the development of trust, Cattell's factor *alaxia*. It possesses the attributes necessarily providing for the growth of adaptability in interpersonal relations; individuals high in this factor can be characterised as being free from jealousy. In short, it may be aptly labelled as enhancing an easy-to-get-along-with attitude (Cattell & Eber, 1957). In conjunction, the patients in this treatment show less inclination than previously to exhibit compulsions, obsessions, phobias, excessive worry (which may or may not be confirmed by the Affect Analysis -- see Chapter 5), excessive vacillation in decision-making, and lack of confidence (Dahlstrom & Welsh, 1960).

The Gestalt Treatment, on the other hand, seems to be defined explicitly, in terms of the average alteration of the personality variables, as generating:

(i) Outgoingness, warmheartedness, easy-goingness, participation.

(ii) Assertiveness, aggression, stubbornness, competition.

TABLE X

Summary of Significant Personality Trait Changes: GAT and GT

Treatment	Test	Factor or Scale	Means Pre-	Means Post-	Probability	Comment
Group-Analytic Treatment (GAT)	16PF	Factor L	7.67	6.83	p = 0.005	The Group became more 'TRUSTING'
	MMPI	Scale 7	43.83	41.00	p = 0.011	The Group became less 'PSYCHASTHENIC'
Gestalt Treatment (GT)	16PF	Factor A	4.14	5.29	p = 0.046	The Group became more 'OUTGOING'
	16PF	Factor E	5.57	6.86	p = 0.004	The Group became more 'ASSERTIVE'
	16PF	Factor G	5.71	4.86	p = 0.044	The Group became more 'EXPEDIENT'
	16PF	Factor Q2	6.14	5.00	p = 0.029	The Group became more 'GROUP-DEPENDENT'
	MMPI	Scale 2	30.43	27.29	p = 0.050	The Group became less 'DEPRESSED'
	MMPI	Scale 8	32.14	28.00	p = 0.050	The Group became less 'SCHIZOPHRENIC'

(iii) Expediency, disregard of rules, weaker superego strength.

(iv) Group-dependence and group-adherence. (Cattell & Eber, 1957)

(v) Reduction of depression: Uplifting and elation.

(vi) Reduced schizophrenia. (Dahlstrom & Welsh, 1960)

On the basis of the argument that the null hypothesis has been clearly refuted, and intuitive perceptions confounded, it now becomes necessary to explain these findings. But, before doing so, certain basic limitations of the analysis have to be declared. In the first place, the analysis was performed on group means, not on individual changes. In the second instance, no regard was paid to the psychological meaning of the items on which change occurred.

The first critical point, that we are concerned with group averages only, is a fault shared by a large proportion of current psychological research as reported in the literature (see Bergin, 1971; and Strupp & Bergin, 1969). Research that follows a design similar to the one outlined here -- that is, pre- to post-treatment questionnaire evaluation -- invariably adheres to and limits itself to gross changes of the whole group. This is then used as evidence as to the efficacy of a particular group therapy. The main disadvantage of this type of design is that it doesn't tell the social scientist whether or not all patients change in the same direction, or whether some gain and some lose, or even whether some gain (or lose) while others remain stable. It merely tells us that, 'as a whole', the group did this or that. This is unsatisfactory since we require to know with some certainty how each of the patients fared, or might fare if subjected to a specified therapy.

In the second place, this kind of report ignores the more subtle psychological changes which can be elicited by scrutiny of how individuals change on specific items. Advantage is gained by this more detailed analysis in that enquiry here uncovers information which may throw a more meaningful light on the nature of the therapy. It was deemed necessary, therefore, to conduct an investigation into the changes, by person and by item, occurring on the 16PF and MMPI, to discover the character of the discrepancy between the intuitive judgements of the observers and the results of the statistical analysis.

Item Analysis: A Rationale

The rationale for the item analysis must be emphasized. The problem is to determine whether the significant changes on the sub-scales have any objective 'psychological' meaning. 'Psychological' in this sense refers to any alteration in the patients' behaviour (as determined by self-report) which could be attributable to the type of treatment received. In other words, the fundamental question is whether the emergent, discovered changes in the preliminary analysis are causally linked to the treatment received.

By way of illustration, consider the following question on the 16PF: #14. You can always notice on a man's face when he is dishonest. (Possible answers are: a. No, b. In between, c. Yes.) Suppose, for example, that the whole of the GAT group answered 'No' before therapy, and 'Yes' subsequent to the treatment. It would be fair to say that such a state of affairs could be explained as a treatment effect, and may be employed as a 'yardstick' by which to measure and classify the GAT therapeutic milieu. In other words, if this example is found to be true, then the GAT treatment group could be categorized perhaps as an environment in which the patients' opinions have been confounded to the extent that they now feel they can determine the integrity of a person simply by facial characteristics. This strikes the present writer as having more direct bearing on a taxonomic description of the GAT than does a possible average trend toward the generic label of 'Practical' (Low M - Praxernia), of which 'Yes' in response to question #14 contributes. It certainly seems more reality-bound, concrete and operational than does the vague and elusive generic description.

Alternatively, consider the case of question #24 on the MMPI: #24. No one seems to understand me. (True-False, dichotomous answer.) Suppose in this case that the whole of the GT treatment group answered 'False' before the therapy and 'True' ex post facto. Again, following similar logic, the GT group could perhaps be characterized as an experience which perplexes the patients. The group encounter experience might be thought of as responsible for generating a feeling of frustration with others. In this example, too, it would appear that such an explanation has more utility than the generic label of "paranoia" and/or "psychopathic deviancy", a diagnosis towards which 'True' in response to this item contributes.

The difficulty of this atomistic analysis is, of course, the possible lack of reliability of the item on a test-retest administration. Random changes may account for the altered response. But fortuitous variations are allowed for in the calculation of group or individual differences in the total pattern of responses.

The item analyses of the 16PF and MMPI were carried out with such assumptions in mind. A subsidary, yet crucial, question arose: What net change on a single item constitutes a significant change, rather than random variation? As it turned out, this question was superfluous, so in what follows it is a matter for academic consideration alone. From the standpoint of clinical intuition, or the 'hunch' of the trained observers, it was arbitrarily decided that a fifty percent change, or better, by the whole group (GAT or GT) on a given item, was to be taken as significant, to be investigated further.

16PF Item Analysis: Group Changes

Before discussing the item analyses, it is imperative to outline the coding system used. The items on the 16PF may be answered on a three point scale ('a', 'b', or 'c'), generally, 'Yes' ('True'), 'In between' ('Uncertain'), or 'No' ('False'). The change is indicated by '+' or '-', and by '1' or '2'. -2 (or +2) indicates a change from alternative 'a' to 'c'; if in the direction of a high factor score, then a '+' is used; if in the direction of a low factor score, then a '-' sign is used. Similarly, for a change from 'b' to either 'a' or 'c', or vice versa, a 1 is used.

The analysis of the total number of questions (187) of the 16PF for the GAT group revealed that only three items met the fifty percent criterion -- and then only and precisely at this level. For the GT group only one question met this standard, again only at the fifty percent level. Table XI reports the GAT results and gives the GT result.

TABLE XI

Summary of the Item Analysis for the GAT & GT Groups: 16PF

Treatment	Factor	Item	Change	Comment
GAT	L	#113	Towards L-	Low score meaning the group becomes more 'TRUSTING'.
GAT	L	#139	Towards L-	(ditto)
GAT	Q_2	#171	Towards Q_2+	High score meaning the group becomes more 'SELF-SUFFICIENT'.
GT	M	#90	Towards M-	Low score meaning the group becomes more 'PRACTICAL', 'CAREFUL', etc.

A detailed explanation of each item listed in Table XI is given in the following passages.

Factor L. Item #113.

If I am quite sure that a person is unjust or behaving selfishly, I show him up, even if it takes some trouble.

a. Yes, b. In between, c. No.

Subject.	GAT1	GAT2	GAT3	GAT4	GAT5
Change.	-2	0	-2	0	-1

A 'negative' change on this question, as exemplified by the results, indicates a move from 'Yes' to 'No' from pre- to post-testing. The two subjects showing no change in this instance also answer 'No'.

Factor L. Item #139.

If a good remark of mine is passed by, I:

a. Let it go,
b. In between,
c. Give people a chance to hear it again.

Subject	GAT1	GAT2	GAT3	GAT4	GAT5
Change	0	-2	-2	-1	0

A 'negative' change on this item indicates a change in answer from 'give people a chance to hear it again' to 'let it go'.

In summary, both questions account for the highly significant change ($p < 0.01$) on Factor L of the 16PF for the GAT group. Important points arise from these two questions: first, Factor L is composed of ten questions and only on two is movement significant. Secondly, out of the total 16PF items (183) only on three does the GAT group change significantly. By chance, one would expect that five in a hundred cases would arise. Consequently, these movements may be regarded as fortuitous variations. From this reasoning it appears that the 'psychological' interpretation of the earlier analysis -- that the GAT group becomes more TRUSTING -- is quite misleading. If a statement regarding 'trustingness' is to be made, then surely it is only made with respect to subject GAT3, and is not to be made with respect to the group 'as a whole'. More likely, one can say the significant finding of the analysis is an artefact arising from random movements which, by chance, in some cases happen to be in the same direction. It would be quite ludicrous, from the point of view of psychological 'significance', to report the GAT treatment as producing such a change.

Factor Q2. Item #171.

I learn better by: a. Reading a well-written book b. In between,
c. Joining in a group discussion.

SUBJECT	GAT1	GAT2	GAT3	GAT4	GAT5
CHANGE	+2	+2	0	+1	0

A 'positive' change on this item indicates a move from answering, 'c' (joining in a group discussion) to 'a' (reading a well-written book).

This movement tends to substantiate the general hostility of the patients to this particular treatment. It is related to their constant emphasis, throughout the treatment and in the clinical interviews, to the therapist's ineffectiveness in helping them to solve their problems and difficulties. Numerous examples could be quoted from both the transcripts of the sessions, and the clinical interviews, of the patients assessment of the treatment, (to paraphrase) as "a waste of time and energy", and as a "non-learning experience".

Factor M. Item #90.

In streets or stores, I dislike the way some persons stare at people.

a. True, b. In between, c. False.

Subject	G1	G2	G3	G4	G5	G6	G7
Change	-1	-2	-2	0	0	0	-2

A 'negative' change on this item, as exemplified by the results, indicates a move from 'c' (False) to 'a' (True). One of the 'no change' subjects answered 'a', the other two answered 'c'. Since the GT group did not move significantly on this factor and since it has little apparent reference to the treatment, it does not warrant any further comment.

The GT group, therefore, moved significantly on four sub-scales of the 16PF. Yet when the individual items, and individual subjects, are examined in depth this finding disappears -- it seems to evaporate. This bizarre fact may be accounted for partly by the formation of sub-groups in the GT group. These groupings are not visible in action in the therapy sessions. But they are defined by the similarity in response to the 16PF (Tables XII and XIII show the 'bonds of allegiance' so formed for the GAT and GT groups, respectively). The formation of 'bonds of allegiance' on the 16PF tends on the whole to nullify the picture of group change on the items, and explains why only one item on the 16PF for the GT group reaches the critical level of fifty percent change. To contrast the GT and GAT groups on this point focuses the problem rather sharply: GAT group - only one 'bond' is formed on the 16PF, compared to six for the GT.

TABLE XII

Change on Items by Individuals with Respect to Group Peers: 16PF for GAT Group

Subject	S1	S2	S3	S4	S5
GAT1 (Nancie)	▨	4	6	10	6
GAT2 (Lucie)	5	▨	4	3	4
GAT3 (Lois)	8	6	▨	⑥	8
GAT4 (Katie)	10	9	⑫	▨	10
GAT5 (Carol	7	6	7	10	▨

Y AXIS

X AXIS

KEY:

Y-AXIS = Change in opposite direction.

X-AXIS = Change in same direction.

○—○ = 'Bond of Allegiance' = Change in one direction is at least 100% greater than in the other.

TABLE XIII

Change on Items by Individuals with Respect to Group Peers: 16PF for GT Group.

Subject	G1	G2	G3	G4	G5	G6	G7
G1 (Lana)	▨	8	13	9	③	12	7
G2 (Sylvia)	8	▨	15	⑰	②	10	4
G3 (Jane)	11	12	▨	16	9	16	8
G4 (Mary)	10	⑥	14	▨	10	10	③
G5 (Lil)	⑨	⑥	7	9	▨	②	3
G6 (Vi)	12	7	13	10	⑫	▨	⑦
G7 (Fritz)	7	3	10	⑪	2	③	▨

Y-AXIS

X-AXIS

KEY: As for Table XII

From an examination of Tables XII and XIII this relationship becomes clear. For the GAT group, subjects GAT3 and GAT4 move, on the whole, in the *same* direction. For the GT group, the following relationships exist:

a. Subject G5 changes in the *same* direction as subjects G1, G2 and G6.

b. (i) Subject G4 changes in the *same* direction as subject G7.
   (ii) Subject G4 changes in the *opposite* direction to subject G2.

c. Subject G7 changes in the *opposite* direction to subject G6.

Attempting to pull the threads together: it appears that two major points are crucial in relation to the GT group. First, and this accords our findings about the GAT group, the initial indication about systematic movement on the 16PF seems to be in error when a detailed item analysis of individual responses is carried out. Secondly, and this is in contrast to our findings about the GAT group, sub-groupings are uncovered in the changes in the answers to the 16PF questionnaire. These tend to nullify the number of responses which might otherwise have reached the fifty percent critical level.

16 PF Item Analysis: Individual Changes

On the grounds that is important for the social scientist to have information about individual changes, in addition to group movements, the author has included this section. Table XIV provides a summary of the GAT group-members' trait changes, and also furnishes this information for the GT group. As a rule-of-thumb, shifts on the factors of the 16PF greater than three stens have been

TABLE XIV

Summary of GAT and GT Individual Changes, by Factor and by Item, on the 16PF.

	Subject	Factor(s)	"Sten" Shift (Direction)	Items
GAT	GAT1 (Nancie)	Factor M* Factor Q2*	6 → 9 4 → 7	14, 65, 90, 91 47, 72, 171
	GAT2 (Lucie)	Factor A*	4 → 7	26, 76, 126
	GAT3 (Lois)	Factor B*	5 → 8	-----
	GAT4 (Katie)	No Change	---	-----
	GAT5 (Carol)	Factor M**	4 → 8	40, 140, 141, 166
GT	G1 (Lana)	Factor F* Factor M**	3 → 6 6 → 2	8, 83, 132 15, 39, 91, 165
	G2 (Sylvia)	No Change	---	-----
	G3 (Jane)	Factor A* Factor C* Factor H* Factor L** Factor Q2*	2 → 5 4 → 1 6 → 3 5 → 9 7 → 4	26, 51, 52 5, 30, 130, 179 35, 85, 86, 110, 135, 186 38, 63, 64, 89, 139 72, 146, 171
	G4 (Mary)	Factor Q4*	6 → 3	25, 49, 75, 124, 125
	G5 (Lil)	No Change	----	-----
	G6 (Vi)	Factor I**	2 → 6	137, 163
	G7 (Fritz)	Factor I* Factor M**	4 → 1 7 → 3	62, 137 39, 90, 116

*p = 0.023

**p = 0.004

recorded. This value was chosen because the probability of obtaining such a shift by chance is low. In fact, a shift of three stens occurs only twice in a hundred cases by chance, so for this sample, of twelve subjects over sixteen variables, the number of instances where chance could have accounted for the changes is about four -- compared to the eleven discovered. For a sten shift of four, the number of times this could have appeared by chance is four in a thousand, or about 0.8 times for this sample; compared to the two found.

In order to keep the following account intelligible, the questions on which movement has taken place will be listed, and a brief synopsis of the changed answers given. The reader is referred to the actual 16 PF items. Table XII gives the individual changes on the 16PF for both groups.

The following analysis, therefore, has one overriding goal: to discover what changes (by individual, by factor and by item) illustrate therapeutic movement.

GAT Individual Changes

Nancie (GAT1)

Factor M (p = 0.023)

This subject changes her opinion on the following questions, to move towards M+ (becomes more 'imaginative'): 14, 65, 90 and 91. Nancie says, in changing her opinion, that (14) "you cannot almost always notice on a man's face when he is dishonest"; (65) "yes, my memory tends to drop a lot of unimportant, trivial things, for example, names of streets or stores in town"; (90) "in streets or stores, I do not dislike the way some persons stare at people"; and (91) "on a long-journey I would prefer to read something profound but interesting" (rather than "pass the time casually with a fellow passenger" - prior to therapy).

It is difficult to see the correlation between the answers indicated and Cattell's notions of becoming more "Imaginative" -- the generic label applied to an M+ score. It is even more difficult and tenuous to attempt to suggest that these changes are indicative of a particular therapeutic movement. In general, if a 16PF factor has a significant number of subjects who move in the same direction, then such movement may, or may not, be attributable to the treatment. But, if only a single subject moves on any one scale, then no conclusions about the therapy in general may be drawn. An explanation of this subject's movement, however, is possible, especially with respect to question #14. This client proved to be the most negative in the group interaction, over all sessions. This assertion is made with the confidence of objective data, as provided by a Bales' IPA. A complete breakdown of the Balesian categories for this patient is provided in Table XV.

TABLE XV

Bales' Categories (over all sessions) for Nancie.

Categories:	1	2	3	4	5	6	7	8	9	10	11	12
%age of acts. initiated:	9.4	26.9	3.8	7.6	4.0	1.1	0.8	0.7	0.4	1.4	23.4	26.5

From Table XV it is obvious that the number of acts initiated in the negative area (Categories 10, 11 and 12) are proportionally higher than acts in the positive area (Categories 1, 2 and 3). The difference becomes salient when the two categories at the extremes are considered. Category #1 (Seems Friendly) compared to category #12 (Seems Hostile) evinces a considerable difference. Most of her hostility was directed towards the therapist, who by virtue of his assumed 'Tavistock' role (as detached, unemotional and impassive leader) was treated in a remarkably negative way. The therapist's "poker-face" no doubt evoked the change in response to this question: he was probably responsible for the about-turn. From time to time this woman accused the therapist (to paraphrase) of being 'dishonest'. Her change of mind, then, was no more than a reaction to the therapist.

Questions #65 and # 90 seem to have no bearing on the therapy received, and will be omitted from this discussion.

Question #91, however, may be related to the therapeutic encounter. Most of the GAT 'air-time', so to speak, was spent in trivial conversation -- the sort one usually experiences on long journeys by train or by bus. It was not surprising, therefore, to find this subject reacting against time-wasting, that is, by adopting an attitude of using time more profitably by reading a book.

Factor Q2 (p = 0.023)

Nancie changes her mind on the following questions, which indicate a move towards 'Self-Sufficiency' (Q2+): (47) "As a teenager, I joined in school sports occasionally"; (72) "Yes, I would rather enjoy life quietly in my own way than be admired for my achievements"; and (171) "I learn better by reading a well written book" (rather than "joining a group discussion" - prior to therapy).

Questions 47 and 72 require no additional comments.

Question #171 tends to fit into the pattern as outlined above for question #91. Again it appears to be a reaction against the therapist, and the treatment he administered. Certainly these two questions show a clear, aversive reaction to the GAT experience. But the crucial question which arises is: do such small movements indicate personality change? The answer must surely be a decisive 'no'. It might well reflect a mood or affect change, but, if we follow Cattell's reasoning and assumptions (about the stability of the source traits), see chapter 2., then we must accept that the source traits are relatively unaffected by moment-to-moment mood alterations. Consequently, for this patient, the trait changes are to be thought of as artefacts.

Lucie (GAT2)

Factor A (p = 0.023)

Lucie moved, on Factor A, towards an A+ score: she became more 'Outgoing'. The following answers contributed solely to this trait alteration. (26) "With the same hours and pay, it would be more interesting to be a waiter in a good restaurant" (rather than "uncertain" between above response and "a carpenter or cook" - prior to therapy); (76) "in starting a useful invention, I would prefer selling it to people" (rather than "working on it in a laboratory" - prior to therapy); and (126) "If the earnings were the same, I would rather be a lawyer" (compared to "uncertain" between between above response and "a navigator or pilot" - prior to treatment).

In trying to relate these answers to the therapy received, and in attempting to interpret the psychological meaning of these items, the reader must concur with the author in stating that the task is difficult. It is easy to see how Cattell reaches the conclusion that these questions contribute to the trait of 'Outgoingness' -- 'waiters' and 'lawyers' in general tend to meet more people through their jobs than do 'cooks' and 'pilots' -- but how does this 'outgoingness' relate to GAT group therapy? This client, in the main, tended to be rather fixed in her orientation to her group-peers; behaviourally, she initiated acts very early on in the first session, and followed this modus operandi throughout the life of the group. It is hard to see, therefore, that she could have this trait (of "Reservedness') in the first instance, much less that she changed to become 'outgoing'. The psychological meaning, then, of this trait movement disappears; it may be ascribed to the treatment, but, more likely, is another artefact of the 16PF test.

Carol (GAT5)

Factor M (p = 0.004)

Carol moved on the following questions on this factor to obtain an M+ score (an M+ score is regarded as being indicative of 'Imagination', rather than 'Practical' for an M- score). (40) "In a group task, I would rather try to improve arrangements" (compared to "in between" above answer and "keep the records, and see that rules are followed" - prior to therapy); (140) "I would like to work as a probation officer with criminals on parole"; (141) "One need not be careful about mixing with strangers, since there are no dangers of infection and so on"; and (166) "Some things do not make me so angry that I find it best not to speak".

Question #40, and the given answer, provoked an astonished reaction from the author and his colleagues. It is, from the objective evidence, a blatant turn-about with regard to what the client really did in the group sessions. On the other hand, it may be what she wanted to do. By way of illustration, the total number of Bales' acts she initiated, over all sessions and all categories, was 1404 (out of a grand total of 29,809) or 4.7%. Of these acts, approximately 1200 fell in Categories #11 and #12, and reveal that she acted with 'tension' and 'hostility', and, additionally, in the non-verbal domain. Generously, one could say that this subject initiated about 300 verbal acts or approximately 1% of the group total. Categorically, this refutes her statement concerning her attempt to 'improve arrangements' in a group discussion, especially in the light of her assumed submissive and passive role in the GAT group. Thus, in Cattell's terms, the psychological meaning of becoming more 'imaginative' is held in question, considering this item at least. This assertion is substantiated, in part at least, by her answer to question #166. Here she denies that 'some things make me so angry that I find it best not to speak'. Behavioural observations during group sessions illustrate that on several occasions in which her emotions surfaced she failed to follow through and verbally communicate her feelings, that is, anger. In summary, this patient's changes on this trait defy logical explanation: they seem to run counter to the objective and behavioural evidence of her in-group activity. Hence, to say that she becomes more 'imaginative' as a result of group therapy is misleading, not to say a blatant and unfortunate error.

GT Individual Changes

Lana (G1)

Factor F ($p = 0.023$)

Lana moves on the 16PF towards an F+ score; that is, she becomes more 'Happy-go-lucky', and the following answers she made on the test contribute to this significant change. (8) "I prefer popular tunes to semiclassical music"; (83) "I would hate to be where there wouldn't be a lot of people to talk to" (compared to "uncertain" - prior to therapy); and (132) "I spend much of my spare time talking with friends about social events enjoyed in the past" (compared to "uncertain" - prior to therapy).

As if to stress one of the main objectives of the Gestalt therapeutic encounter, this patient moved on the Cattell factor relating to 'surgency' or 'lively-impulsivity'. Two questions seem to account for this -- question #8 may, for all practical purposes, be discounted. The answer to question #83 is difficult to relate to the treatment, and may be a simple confirmation of what was previously in doubt. The answer to question #132, however, illustrates the *modus operandi* of this Gestalt treatment. Although the therapist was actively engaged in focusing on the 'here-and-now' of group interaction, the pattern of communication for the group members concentrated on historical events: problems at work, at home and outside the group predominated. The 'there-and-then' orientation of this group served the function of maintaining the fantasy (in effect reinforcing it) about past social and other events. This subject, then, was influenced and shaped by this type of in-group behaviour, and her answer could be said to emanate from, and be ascribed to, the treatment.

Factor M (p = 0.004)

Here Lana becomes more 'Practical' (M- score), compared to M+ score or 'Imaginative' before the treatment. The following answers to certain 16PF questions contribute to this shift. (15) "It would be good for everyone if vacations (holidays) were longer and everyone had to take them"; (39) "For parents, it is more important to teach children how to control emotions" (rather than "help their children develop their affections" - prior to therapy); (91) "On a long journey, I would prefer to pass the time casually with a fellow passenger" (compared to "read something profound, but interesting" - prior to treatment); and (165) "Talk with ordinary, habit-bound, conventional people annoys me because it deals with trifles and lacks depth" (compared to "is often quite interesting and has a lot to it" - prior to therapy).

Question #15 is hard to interpret, and will be disregarded since it has little to add to an understanding of this patient's movement on the 16PF test, as a result of exposure to the GT therapy.

On the other hand, questions #39, #91, #165 appear to have possible explanations which are grounded in the GT therapy. An anomaly exists, however, in the answers to #39 and #165. It is necessary at this point to give a brief description of the therapist's role in the GT group, since this role, the technique used, and the therapist's attitude seem to have influenced the whole of the GT group-members' behaviour. The answer to #39 reflects a possible reaction against the therapist, in that he was trying to ensure that the GT group members 'developed their affections' or, more accurately, examined critically their feelings and emotions in such a way that they would arrive at a more adequate (in terms of social survival) understanding of themselves and their relations to others. This subject reacted by answering question #39 in the opposite way; that is, by suggesting that parents should teach their children to 'control their emotions'. Conversely, the answer to question #165 illustrates her tacit acceptance of the GT therapist's role, in that 'ordinary, habit-bound people' (i.e. people not fortunate enough to have group psychotherapy), and their conversations, are annoying because they 'deal with trifles and lack depth'. Perhaps this is one important benefit this patient has derived from therapy. But the alternative possibility must not be overlooked: that this change may have occurred fortuitously, and the foregoing explanation is pure fantasy!

The answer to question #91 may also be regarded as treatment-induced. The therapeutic milieu of the Gestalt treatment was characterized as one where contributions (i.e. verbal communications) were highly praised and reinforced especially from this patient. It is not surprising, therefore, to find that this subject, on this question, has moved from being 'reserved and inward looking' to being 'outgoing and forward'. This result tends to confirm clinical expectations obtained from behaviour observations of the twenty group-sessions.

Jane (G3)

Factor A (p = 0.023)

Jane moved from a sten of 2 to a sten of 5 on this factor; in effect moving from being 'reserved' to a balance between 'reserved' and 'outgoing'. The following questions, and Jane's answers, contributed to such a shift. (26) "With the same hours and pay, it would be more interesting to be a waiter in a good restaurant" (compared to "a carpenter or cook" - prior to therapy); (51) "If I had to choose, I would rather be a high school teacher" (rather than "uncertain" between above response and "a forester" - prior to therapy); and (52) "For special holidays and birthdays, I like to give personal presents" (compared to "feel that buying presents is a bit of a nuisance" - prior to therapy).

Questions #26 and #51 appear related to the generic label of 'outgoingness' as delineated by Cattell, but do not, in the opinion of this investigator, add anything to a definitive description of the GT treatment, or even help a description of what benefit or disadvantage this subject received as a direct result of GT therapy. In conclusion, therefore, the answers to these questions throw no light at all on the discovered significant change on this 16PF factor, and again may be regarded as artefacts of the test instrument.

Factor C (p = 0.023)

Here a move towards being 'affected by feelings' was witnessed. Jane's sten score change was from 4 to 1, so this client appears 'easily upset' and 'emotionally less stable'. The following items on the 16PF test contributed to this shift. (5) "I feel a bit nervous of wild animals even when they are in strong cages"; (30) "In my personal life I do not reach the goals I set"; (130) "I cannot work carefully on most things without being bothered by people making a lot of noise around me"; and (179) "If I make an awkward social mistake, I can't forget it too quickly".

Question #5, at a stretch of the imagination, is indicative of the general mental deterioration of this patient over the life of this group, in fact she had a serious problem following this group experience and had to be hospitalized as a result. Question #30 also epitomizes this predicament. Her answer to question #179 may be a treatment effect, in that she was constantly hounded by her group-peers whenever she made a social mistake. For instance, she withdrew from group activity on numerous occasions, that is, she became silent and sulked. Consequently, she was unable, it seemed, to forget such an event, and hence the given answer to this question. An explanation of such changes revolves around 'mood' changes, that is to say, temporary treatment-induced affect changes. These do not, however, represent permanent personality changes (but the only way to confirm this hypothesis would be to retest after a considerable time-interval). It is indeed a Herculean task to make the case that these alterations in response to the 16PF show personality changes, rather than mood changes. Needless to say, the changes could be, in fact, a function of random fluctuations in response to the test instrument.

Factor H (p = 0.023)

In this case, Jane moved towards being more 'shy' and 'restrained'. The sten shift was from 6 to 3, representing a probability level of 0.023. The following statements contributed to this move. (35) "I get slightly embarrassed if I suddenly become the focus of attention in a small social group"; (85) " 'stage-fright' in various situtations is something I have quite often experienced"; (86) "When I am in a small group; I am content to sit back and let others do most of the talking". (110) "I do not find it easy to mingle among people at a social gathering"; (135) "I do not consider myself to be a very sociable, outgoing person"; and (186) "I'm not the energetic type who keeps busy".

The common thread running through these answers is, of course, the reality-based and concrete influence of the group therapy. All the answers, with the exception of #186, pertain to the GT treatment received. They all refer to her behaviour in the GT group: her 'embarrassment' when the centre of attention; her 'stage-fright' from time to time in the GT group when confronted by the therapist; her passivity in the interaction with other group members; her difficulty in relating to group-peers; and her lack of ability to socialize and to "chat" with the other members. The inference that may be drawn from these results is quite simply that such changes do not represent a trait change, but rather reflect her inability to generalize to all social situations when answering the 16PF test. Alternatively, the behaviour she exhibited in the GT group influenced the way in which she answered these questions. Any attempt to suggest that such answers show this-or-that trait change is doomed to failure.

Factor L (p = 0.004)

Jane moved on this scale towards being more 'suspicious' (L+). The sten shift was from 5 to 9, and the following statements contributed to the shift. (38) "When I have been put in charge of something, I insist that my instructions are followed or else I resign"; (63) "If someone got mad at me, I would get irritated" (compared to "uncertain" prior to therapy); (64) "When I read an unfair magazine article, I am more inclined to feel like 'hitting back' than to forget it"; (89) "Business superiors or members of my family, as a rule, find fault with me when there is no real cause"; and (139) "If a good remark of mine is passed by, I give people a chance to hear it again" (compared to "let it go" prior to treatment).

The answers to questions #38 and #64 seem to have little psychological meaning as applied to this patient in this therapy, so they will be discarded from this discussion. Question #63 appears to conform to the logic as outlined under Factor H for this client, in that a behavioral characteristic commonly shown by this client was her irritability, including fidgeting, reaching for cigarettes, etc., when she was confronted by an aggressive group-peer. All of this points to the given answer of question #63. Similarily, the same may be said of questions #89 and #139. For the answer to #89, read 'therapist' for 'business superiors' and the answer given becomes intelligible: if this is the case then this client may be saying that "I'm picked on and accused of things I didn't do" -- a paranoid reaction? With the answer to question #139, and applying similar logic as previously, it may be possible to discount this answer as not contributing to a trait movement. In actual fact, this comment seems to be another example of straight-forward reporting of behavioural characteristics, and so may well be a treatment effect, but, more likely, was the result of a temporary preoccupation with the GT group experience.

Factor Q2 (p = 0.023)

Here Jane became more 'group-dependent' and less 'self-sufficient'. The sten movement was from 7 to 4. The following statements she made contributed to this movement. (72) "I would rather be admired for my achievements than enjoy life quietly in my own way"; (146) "I don't like to do my planning alone, but prefer interruptions and suggestions from others"; and (171) "I learn better by joining a group discussion" (compared to "reading a well-written book" - prior to therapy).

The answer given to #72 is rather ambiguous with respect to psychological meaning, and so will be ignored for present purposes. Questions #146 and #171 require further investigation. When this patient says that she does not "prefer to do her planning alone, without suggestions from others", it may reflect her agreement with the therapist and group-peers in the GT group, who, generally speaking, attempted to get Jane to face up to the reality of her problem. She now realizes that other people can and do help friends in time of difficulty. This may well be a treatment effect, but to say that it illustrates a personality trait alteration is rather presumptuous, and to say that this effect will, in all cases, emerge from the "Gestalt" therapy is at best foolhardy.

When this client suggests that she learns better by 'joining in a group discussion' she supports the assertion that is made above concerning the human propensity to help those in trouble. This answer also lends credence to the fact that this patient seemed to gain some benefit from this therapeutic encounter, which contrasts vividly with the GAT group -- Subject GAT1 moved in the opposite direction on this question. The important question to ask, at this point, is not what advantages or disadvantages accrue from the treatment, but rather do these item changes reflect personality trait changes or not? In the considered opinion of this writer, the answer, from the available evidence, must be negative: either the changes are the result of random fluctuation, or the resultant of temporary preoccupation with the therapy. Assumptions such as these are, of course, necessarily tentative and must await confirmation or refutation by future experimental studies.

Mary (G4)

Factor Q4 (p = 0.023)

Mary's significant movement on the 16PF is restricted to this factor, where she became more 'relaxed', 'tranquil' and 'unfrustrated'. The sten shift was from 6 to 3, and the following statements contributed to this movement. (25) "When something really makes me furious, I find I calm down again quite quickly"; (49) "I never get in a state of tension and turmoil as I think of the day's happenings"; (75) "I am always able to keep the expression of my feelings under exact control"; (124) "I rarely get angry with people too quickly;

(125) "I can always change old habits without difficulty and without slipping back"; and (149) "I don't get tense as I think of all the things lying ahead of me".

All of these answers may be directly related to the therapy received through the behavioural evidence available. But the recurring question (of whether or not such items are indicative of personality trait alteration) again arises. It certainly looks as if change has occurred. The position that has been taken by this investigator -- that the change is a temporal and contiguous manifestation of either mood or affect oscillation, due to the small group experience influencing the way the subjects answer the personality test -- is open to debate. It is merely hypothetical, being based on behavioural observations of the patients which were not systematic, and in which a strong element of subjectivity no doubt played an important part. In the case of this subject, observation of her in-group activity supports the answers she gives to the above questions.

The answers to questions #25, 75 and 124, suggest that this client was reacting to the therapist's method of operation -- the therapist attempted to manipulate the group-members into revealing and working through their emotions -- in that she states she is capable of keeping her emotions under control. A causal relation inferred from such changes, is based on shaky foundations.

Vi (G6)

Factor I ($p = 0.004$)

Vi moved on this factor to become more 'tender-minded', 'clinging' and 'sensitive'. The sten shift was from 2 to 6, so a more accurate description would be to say that Vi has become less 'tough-minded' and 'self-reliant'. The statements given below added to this movement. (137) "I enjoy music that is emotional and sentimental" (compared to "light and brisk" - prior to therapy); and (163) "In school I preferred English" (compared to "uncertain" between "English" and "Mathematics" - prior to treatment).

The psychological meaning of these two statements is obscure, and, consequently, this particular movement may be regarded as an artefact of the administration of the 16PF.

Fritz (G7)

Factor I (p = 0.023)

Fritz changed on this factor to become extremely 'tough-minded'. The sten shift was from 4 to 1. The following statements contributed to this 'dramatic' change. (62) "I have a good sense of direction (find it easy to tell which is North, South, East or West) when in a strange place"; and (137) "I enjoy music that is light, dry and brisk" (compared to "emotional and sentimental" - prior to therapy.

Again, the psychological meaning of these two statements is obscure. Need more be said?

Factor M (p = 0.004)

Fritz changed on this factor to become more "practical", "careful" and "conventional". The sten change was from 7 to 3, which gives a high value to "p". The statements given below contributed to this trait alteration. (39) "For parents, it is more important to teach their children how to control their emotions" (compared to "help their children develop their affections" - prior to treatment); (90) "In streets or stores, I dislike the way some people stare at people"; and (116) "I never feel the urge to doodle and fidget when kept sitting still at a meeting".

Question #90 does not appear to have any relevance with respect to the group therapy, and so will be ignored in this discussion. Perhaps one could say that this client, a member of the "Gestalt" group, is reacting against the goals and techniques of the therapist when Fritz suggests that "parents should teach their children to control their emotions" rather than "help their children to develop their affections". The latter was a "rule" of therapy imposed by the GT therapist, and which did not seem to match Fritz's expectations. This client was very active and prominent during the first half of the treatment, with little time for 'doodling' and 'fidgeting'. In the second half, however, with the advent of the dyadic interactions (therapist plus one other), he was 'kept sitting still'. This, in large part, probably accounted for his changed answer to question #116.

Thus, these two questions, which account for the change on Factor M with a probability level of 0.004, are possibly treatment-induced, but the causal link is obscure.

MMPI Item Analysis: Group Changes

The coding system employed for this analysis was the same as for the 16PF item analysis (p. 72). In view of the large number of questions on the MMPI test (550), the author decided to analyze only those scales where movement occurred on the original computer analysis; that is, Scale 7 (Psychasthenia) for the GAT group, and Scales 2 (Depression) and 8 (Schizophrenia) for the GT group.

For the GAT group, who moved on only one scale (7), the analysis of the 48 items comprising this scale revealed no items reaching the criterion of fifty percent change. In fact, the analysis disclosed that only four questions met the standard of forty percent change towards a low score in 'psychasthenia'. These were counter-balanced by four questions which reached forty percent change towards a high score on 'psychasthenia'. Paradoxically, three members (GAT 1, 4 and 5) changed to become more 'psychasthenic', although these were not significant changes. Thus, to suggest that the GAT group became less psychasthenic would be to contradict empirical findings, and illustrates the absurdity of relying on 'group averages' as ways of categorising treatments. The discovered movement on this scale, therefore, is most likely either an artefact of administration of the MMPI, or a function of group averages and the 'repeated measures' computer programme.

The GT group moved on Scales 2 (Depression) and 8 (Schizophrenia) on the MMPI. The Item Analysis subsequently revealed one question on each scale as reaching the criterion level. These are shown in Table XVI.

TABLE XVI

Summary of the Item Analysis for the GT Group: MMPI

Scale	Number of Items	Item Reaching the 50% level of change	Direction of Change	Comment
2 (Depression)	60	#89*	Towards 2-	Became less depressed.
8 (Schizophrenia)	78	#15**	Towards 8-	Became less schizophrenic

*50% Change

**64% Change

Scale 2 (Depression) Item #89.

(89) It takes a lot of argument to convince most people of the truth.

a. True b. Cannot Say c. False

Subject	GT1	GT2	GT3	GT4	GT5	GT6	GT7
Change	0	-1	0	-2	-2	-2	0

A ' negative' change on this item indicates a move from 'False' to 'True' from pre- to post-testing. The three subjects showing no change also answer 'True'.

This item appears to be the major and significant cause for the reported diagnosis of a decrease in depression for the GT group. All other items may be considered random or spurious influences. In the first place, how does this question contribute to a diagnosis of 'less depressed'? The authors of the MMPI may well be justified in their 'causal link', but this author is not convinced of its validity. All of these patients are in accord in their answer to this question following therapy. Those that change may be reacting to the GT therapy, where stubbornness in argument, especially with the therapist, was a matter of fact. This item, then, might well illustrate one of the 'learning' outcomes of this 'Gestalt' therapy. But to suggest that this item 'causes' the GT group, 'as-a-whole', to become 'less depressed' is naive and a great nonsense.

Scale 8 (Schizophrenia) Item #15.

(15) Once in a while I think of things too bad to talk about.

a. True b. Cannot Say c. False

Subject	GT1	GT2	GT3	GT4	GT5	GT6	GT7
Change	-2	-1	0	-2	-2	-2	0

A 'negative' alteration on this question indicates a move from 'True' to 'False'. One of the two subjects not changing answered 'True' (GT3), and the other answered 'False' (GT7).

It is difficult to ascribe this change to the treatment received, and to decipher the 'psychological' meaning of such a change. Most of these clients now believe that they "never think of things too bad to talk about", which may be a therapeutic-induced change. It represents 'learning' to be sure, but one difficult to pin-point and verify. The claim that this group has become 'less schizophrenic' as a result of therapy appears in error when a detailed item analysis is conducted.

MMPI Item Analysis: Individual Changes

The total individual changes on the MMPI test were surveyed for significant scale movements. The method for calculating the probability that these changes differed from random changes involved a simple 'normal curve' calculation. A shift of 1.65 Standard Deviations occurs only five times in a hundred cases by chance, and so any move greater than, or equal to, this value required investigation. The exact probability level was determined by dividing the adjusted-score differences by the standard deviation of the specific scale (Welsh & Dahlstrom, 1960, p. 48). The value obtained was then compared to the 'normal curve' and the area under the curve, above this value, was the level of probability. For the number of persons here (12) and the number of scales (10), the number of instances where chance could have accounted for the changes is six - compared to the five found. Consequently, the conclusion of fortuitous movement must not be eliminated at this stage. Table XVII gives a summary of the findings.

TABLE XVII

Summary of GAT & GT Individual Changes by Scale and by Item on the MMPI

Treatment	Subject	Scale(s)	Adjusted-Score Shift	Probability	Items
Group-Analytic Treatment	GAT2 (Lucie)	Scale 6	18→12	$p = 0.035$	93, 107, 110, 117, 202, 364
		Scale 8	54→41	$p = 0.023$	15, 76, 156, 202, 266, 282, 302, 306
'Gestalt' Treatment	GT1 (Lena)	Scale 1	30→21	$p = 0.033$	51, 55, 62, 68, 108, 114, 189, 190
		Scale 3	41→29	$p = 0.017$	8, 10, 51, 93, 114, 136, 179, 189, 190
	GT7 (Fritz)	Scale 4	20→13	$p = 0.045$	21, 82, 102, 180, 231, 267, 284

Lucie (GAT2)

Scale 6 (p = 0.035) [Paranoia]

Lucie changed on this scale to become less 'paranoid'. The following items contributed to such a diagnosis. (93) "I think most people would lie to get ahead"; (107) "I am happy most of the time"; (110) "Nobody has it in for me"; (117) "Most people are honest chiefly through fear of being caught"; (202) "I don't believe I am a condemned person"; and (364) "People don't say insulting and vulgar things about me".

Scale 8 (p = 0.023) [Schizophrenia]

Lucie changed on this scale to become 'less schizophrenic'. The following items contributed to this diagnosis. (15) "I never think of things too bad to talk about"; (76) "I almost never feel blue"; (282) "I never feel hate towards loved ones in my family; (266) "I never seem to get very excited; (302) "I have never been in trouble because of my sex behaviour"; (303) "I am not so touchy on some subjects that I can't talk about them; (307) "I don't refuse to play some games because I am not good at them"; (323) "I haven't had any very peculiar and strange experiences"; (332) "My voice never leaves me or changes, except perhaps when I have a cold"; and (345) "I never feel as if things were not real".

Lucie has apparently changed on two MMPI scales. The questions, on which she has changed her opinion, obviously may reflect her learning outcome, but whether they show 'personality' change is a very different matter.

Her answer to #364, after the treatment, is contrary to her protestations during the therapeutic encounter, where she accused the therapist on a number of occasions of being 'unfair' and of saying 'nasty, cruel things' about her and her group-peers. Her changed opinion on #110, too, is supportive of this line of argument.

In general, the changes here may be indicative of personality change, but more likely are either random patterns of learning outcomes, or chance fluctuations in response to the MMPI.

Lana (GT1)

Scale 1 (p = 0.033) [Hypochondriasis]

Lana changed on this scale to become 'less hypochondriacal'. The following items contributed to this diagnosis. (51) "I am in just as good physical health as most of my friends"; (55) "I am almost never bothered by pains over the heart or in my chest"; (62) "I don't have feelings like burning, tingling, crawling, or like 'going to sleep', in any part of my body"; (68) "I hardly ever feel pain in the back of my neck"; (108) "I don't have a fullness in my head or nose at anytime"; (114) "I never feel as if there were a tight band about my head"; (189) "I never feel weak all over"; and (190) "I have very few headaches".

Scale 3 (p = 0.017) [Hysteria]

Lana moved on this scale to become 'less hysteric'. The following items added to this diagnosis. (8) "My daily life is full of things that keep me interested"; (10) "I never have a lump in my throat"; (93) "I think most people would lie to get ahead"; (136) "I commonly wonder what hidden reason another person may have had for doing something nice forme"; and (179) "I am not worried about sex matters".

Undoubtedly Lana has become 'less' prone to hypochondriasis; the changed answers 'prove' this. But what has this to do with personality, much less 'group learning'? The 'psychological' meaning of this is that she now worries less about her physical health. Is this the result of group therapy, or of the therapeutic effect of everyday contact with family and friends? If the latter, then the only way we could possibly verify this is by the use of 'controls' - a difficult task.

The only two questions which relate directly to the GT therapy are #93 and #136. But the argument of random change is also persuasive.

Fritz (GT7)

Scale 4 (p = 0.045) [Psychopathic Deviancy]

Fritz changed on this scale to show a 'lower' tendency for psychopathic deviancy. The following questions illustrate this trend. (21) "I have never wanted to leave home"; (82) "I am easily downed in an argument"; (102) "My hardest battles are not with myself"; (180) "I find it hard to make talk when I meet new people"; (231) "I like to talk about sex"; (267) "When in a group of people I have trouble thinking of the right things to talk about"; and (284) "I know I'm not being talked about".

Fritz's answers to questions #82, 102, 180 & 267 may be interpreted in terms of the events occurring in the GT therapy sessions. His statement "I am easily downed in argument" is especially apt since it was witnessed many times in the therapeutic encounter. The belligerents were the therapist and several of the more aggressive, liberally educated females in the group. Consequently, his "hardest battles" are with other people. His answer to #180 poses an enigma. In the first session, for instance, he was constantly stressing this point, whilst manifesting monopolistic behaviours. The same argument applies to question #267.

In summary, Fritz obviously learned a great deal in the sessions. But to say that such learnings contribute to a diagnosis of 'lower' tendency for psychopathic deviancy is, perhaps, a little misleading.

Summary

The paradox that has been posed by this research is indeed worthy of our attention. On the one hand, the analysis of the group data clearly indicates that significant changes have occurred in the personality structure of the participants in both group treatments (some changes highly significant: $p = 0.004$). On the other hand, on analysis, these shifts tend to evaporate.

The assertions made about individual advantages of group psychotherapy, in the light of this material, should be considered, at best, as tentative hypotheses - hypotheses for future research which may or may not be confirmed. At present, however it seems that the 'improvements' manifested by scores on tests may best be described as temporary mood or affect oscillations. These influence the client's responses but seem to have no correlate in the domain of personality traits.

The original contribution of this study up to this point has been, therefore, in its subterranean meanderings - from the apparently obvious to the hidden reality. The findings of the item-analyses are in accord with other research in this area (Park, 1971; McLeish & Park, 1972; and Campbell and Dunnette, 1968) - insofar as they attest to the relative stability of the personality variables over relatively short time intervals.

The debate will no doubt continue, but, from the perspective of this study, with the instruments used and the treatments administered, the answer to the question posed as the title of this chapter must be a categorical disclaimer. Personality change in small therapeutic groups is, in our experience at least, a fiction. This statement is made after the most detailed and painstaking analysis of the data. The myth of short-term therapeutic personality movement is revealed for what it is: a myth, no more no less.

CHAPTER V

AFFECT CHANGE AS A RESULT OF SMALL GROUP PSYCHOTHERAPY: AN EXPERIMENTAL EVALUATION OF THE V.A.S.T. CODING SYSTEM

Introduction

This chapter will be devoted to a statement and an explanation of the results of the VAST analysis of the pre- and post-therapy interviews, since this provided the 'raw data' on which the coding system was employed. First, the group changes will be examined for affect and theme changes, and this will be followed by a brief look at individual learnings and movements. Secondly, interviewer-interviewee interaction effects will be presented and scrutinized. Finally, the relationship between specific personality traits and emotional behaviour is probed.

Before this, however, a glance at the material under examination would prove advantageous. The following two excerpts are from the clinical interviews. To illustrate the changes in themes from pre- to post-treatment, one extract of each is given. In each case, the section of the interview has been coded using the VAST system. The number is the Affect Category, and the letter the Theme Category. The extracts illustrate all the affect categories, and a few themes - for instance, 'therapy', 'self', 'group peers' and 'society in general'.

Lil: Pre-Treatment Interview

Interviewer (I): What I'd sort of like to ask you, or get conversation revolved around, /2A/ is what sort of expectations do you have about being in this kind of a group? /2A/

Lil: Well, actually, I don't know what kind of a group it is, /2A/ I don't know how big it would be, or anything, /2A/ So I -- um -- /3B/ apart from anything else I think, probably, a group like this would be a good experience, /2A/ just to well-a learning experience, /3A/ Its very ...

I: Why do you think, for example, that, ah, /3A/ (brief pause -- bp) Dr. P____, or anyone else, might think it would be good for you to be in such an experience /2A/ -- a group experience? /2A/

L: Ahm, /3B/ because I think Dr. P____ thinks (bp) that I-I /3B/ lack confidence in special situations. /5A/ Well, I lack confidence, and I-I /3B/ feel as if I can't form any kind of relationships very well. /5B/ And, I guess, he thinks the group would be better for me than ... (bp) /2A/

I: You say Dr. P____ thinks that. /2A/ Is this-is this ... /3A/

L: (overriding) Well, I guess /4A/ he thinks that, 'cause that's the impression I've given him. /2A/ 'Cause that's what I think is wrong with (bp) myself (sighs). /5B/

I: Can you tell me what -- in your own sort of words -- what this means? /2B/ This "not able to establish relationships" as you put it? /2B/

L: Well, ahm, /3B/ I seem to be able to establish relationships, /2B/ but I don't seem to be able to (bp) establish long-term relationships (bp) /2B/

I: This is something you desire? /2B/

L: No. I don't really. /4A/ It just never works out that I (bp) --

well, I /3B/ think its basically that I'm not married. /2B/ And that sort of (bp) ...

I: This is the cause of, /2B/ you know, /3A/ it sounds ...

L: (interjecting) Well, /3B/

I: (continuing and overriding) /4B/ as though you're saying this is a kind of a concern? /2B/

L: (emphatically) Well, no! /4A/ I-I-I /3B/ don't think it is, you know? /3B/ I-I wouldn't (bp) /3B/ -- I guess its a concern because of social pressures, /3I/ you know? /3B/

I: Um-hum. /B/

L: 'Cause my mother thinks that I'm the only failure (laugh-cum-sigh) /3B/ in the family, /5F/ 'cause I'm not married ... (bp)

I: (interjecting) Oh! I see. /1B/

L: (continuing) ... and things like that. /5F/ But, I mean, I don't think I'd want to be married. /2E. (bp) Well, I guess, sometimes it does worry me, yeah. /3B/ But mainly from the fact of why am I different to other people. /3B/ 'Cause other people get married and I don't. /5B/

I: Do you think this is the only particular way that you might be different from someone else? /2B/ Or the only outstanding way? /2B/ (bp)

L: Ahm, (bp) well I-I /3B/ wonder if I've got sort of the same desires, and, (bp) ahm, /3B/ sense of values as other people. /3B/ You know, I-I'm /3B/ always wanting to know how other people think. /2B/ I guess just to compare myself with them. /3B/ You know, even wanting to know little details of their lives, and things, /3I/ you know? /3B/

Dean: Post-Treatment Interview

Interviewer (I): I'd like to ask you first of all what sort of -- what your general feelings and reactions are to the experience itself? /2A/

Dean (D): Well, it frustrated me. /5A/ Ah, /3B/ from the first day -- not knowing exactly, /5A/, ah, /3B/ what the therapist's role was, /5C/ you know, /3B/ what he was trying to do. /2C/ And for the longest time I was trying to tie in his comments with ours, /2C/ you know? /3B/ Like, ah, /3B/ someone in the group would say something, /2D/ and then he'd make a comment that seemed unconnected -- irrelevant somehow. /5C/ But I had come to that group, /2B/ thinking he was going to guide it. /5C/ So, I had to believe that -- that, ah, /3B/ what he was saying was -- was important. /5C/ So, I have to go back and try to tie everything in. /2A/ I wasn't able to do that too often: /5B/ Able to see the connection between what he was saying, /2C/ and the response to the rest of us. /2D/ Course, that takes time for me to try to link things up, /5B/ and by then -- by the time /3B/ I have something, ah, ah, /3B/ someone else is talking, /5D/ and then, of course, you've gotta be listening to them. /5D/ So, it was just a big schmozzle for me most of the time. /5A/

I: Uh-huh. /1B/

D: And, ahm, /3B/ I wasn't surprised that -- that /3B/ most of us kept the talk on a fairly superficial level. /2D/ Ah, /3B/ gap-filling, tea-party talk. /2D/ I thought at one time that -- that, ahm, /3B/ well the whole exercise wasn't really to try to figure out what the doctor was saying /5C/ -- it was just to attack, and be attacked /2A/ — put yourself in that position so as to bring out emotion: ah, ah, /3B/ anger, appreciation, whatever /2A/ -- bring out spontaneously in whatever strength that's going to show. /2A/ Instead of having everything calculated and weighted, and -- everything that you say. /4C/ I thought, perhaps, that if everybody got talking on /2D/ — on, ah, /3B/ certain more touchy issues, and weren't afraid to, as the doctor put it, "invest" in that way. /5D/ That, ahm, -- that /3B/ they'd benefit by it -- by being attacked. /2D/ This is what I-I, ah, /3B/ thought.

I: What do you think was keeping the group on this superficial level? /2A/

D: Oh, the fact they're human, afraid to unearth the skeletons in the closets. /3D/ And having fronts -- defenses -- torn down, /3D/ and leaving them feeling kind of hollow. /3D/

I: What do you think presented all this threat in the group /2A/ -- that this would happen? /2A/

D: I think, ah, -- would you repeat that? /3B/

I: What do you think posed the threat in the group, /2A/ that this would be the result of? /2A/ People confronting their true feelings, and attitudes about things /2A/ -- or facing their problems openly. /2A/ That this would be a punitive experience. /2A/

D: Well, ahm, /3B/ we were all on the defensive. /3D/ I think we all are on the outside /2D/ as well as in the group-setting. /3A/

I: Do you think you're on the defensive as much as you were in that particular group? /2A/

D: Oh, yeah. /5B/

I: In your daily life? /2B/

D: Yeah. /5B/

I: Just as negative? /2B/

D: Yeah. /5B/ But I think you see, that being on the defensive /3D/ we took most of the doctor's comments as put-downs. /5C/ And quite often I guess they were just objective statements/2C/ that we, you know, ah, /3B/ — pointed out what we were really trying to say. /2C/

I: Um. /1B/

In this way, from the interviews, a tally of the "acts" falling into each of the forty-five categories was obtained for the client and the interviewer. The 'raw data' were then transformed into percentages to enable a quick and efficient comparison to be made. The results are contained in Appendix H, where Tables illustrating (1) Affect change by group and by person; (2) Theme change by group and by person — including the major division of 'primary' versus 'secondary' affiliation; and (3) Interviewer change on Affect and Theme, are to be found.

Group-Analytic Treatment Changes on VAST: Affect

The statistically significant movements on the total affect scores for the GAT group are given in Table XVIII. Significance here, as elsewhere in this chapter, was determined by a chi square test of independence.

It must be emphasized here that the conclusions reached by using the VAST system must be regarded as treatment specific; that

TABLE XVIII

Changes on Affect Categories (Group-Analytic Therapy)

Category	Description	Level of Probability	Group Members Contributing to Shift	Group Members NOT Contributing to Shift	Comment
2	NEUTRAL: Objective	$p < 0.001$	Lois (GAT 3) Nancie (GAT 1) Katie (GAT 4) Carol (GAT 5)	Dean (GAT 6)* Lucie (GAT 2)*	The group becomes more objective.
3	ANXIETY-FEAR.	$p < 0.01$	Carol (GAT 5) Nancie (GAT 1) Lucie (GAT 2) Lois (GAT 3)	Dean (GAT 6)** Katie (GAT 4)**	The group becomes less anxious and fearful.
5	FRUSTRATION-SORROW.	$p < 0.05$	Katie (GAT 4) Carol (GAT 5) Nancie (GAT 1) Lois (GAT 3)	Dean (GAT 6)** Lucie (GAT 2)**	The group becomes less frustrated and depressed.

* Slight decrease (not significant)

** Slight increase (not significant)

is, unique to this group-analytic (or "Gestalt") treatment given by these therapists to these patients. Additionally, any reference to "objectivity", "positivism", "anger-hostility", "anxiety", "frustration", etc., means these behaviours as determined by the VAST coding system.

A quick perusal of Table XVIII reveals that specific changes in emotional behaviour were detected. The main finding is that the GAT group, as a whole, "improved". A word of caution on this statement is needed. Implicit in the following analysis is the assumption that significant gains on objectivity and positive affect are 'beneficial' in the therapeutic sense. Similarily, a significant decrease in negativism (Categories #3, 4 and 5) is also "beneficial" to the client. On the other hand, it is assumed that a significant decrease in positivism and objectivity, and increase in negativism, are necessarily indicative of a worsening of the client's condition. However, caution must be exercised in the generalizability of these findings. It is by no means certain whether or not such 'benefits' are transferable, or will be transfered, to the client's work-a-day world.

The GAT therapy may, therefore, be considered a success on this criterion. In other words, the goals and objectives of the therapist were achieved, and amelioration of the clients' problems produced. This, incidentally, is contrary to the observer's 'hunches' and intuitions (see Chapter 6 — especially the 'Hypotheses' formulated at the time of the experiment).

The GAT group, then, become more objective; less frustrated, depressed, sorrowful and dejected. The increase in objectivity resulted from a general decrease in anxiety and in frustration. Those GAT members who changed in the opposite direction to the main trend, did not change significantly, and did not detract from this overall movement. Movement also occurred on 'positive' affect and 'anger-hostility', but the change was in no way systematic; that is, the change could have arisen by chance.

The conclusion which springs to mind is that the group-analytic treatment 'caused' such a change. But, with the present experimental design, where there are no controls (save for the clients acting as their controls), and where the question of 'spontaneous remission' as an alternative explanation is the skeleton in the cupboard, the effectiveness of the therapy is indeed a difficult conclusion to justify. All the evidence, of in-group activity, points to the antithesis: that the GAT group ought to have become less objective, and more anxious and frustrated. The discovered change, therefore, was at best unpredictable, in the sense that the improvements in the GAT group had what might be called a misleading and specious appearance. A way to establish the relevant facts might be to carry out a VAST analysis of the on-going, 'live' group behaviour.

As a final note about the actual affect changes, mention should be made of the total overall movement on positive and negative affect. For the GAT group no significant change on the emission of positive emotional behaviours occurs. But on the negative affect areas there is a significant decrease in emission ($p < 0.001$).

Gestalt Therapy Group Changes on VAST: Affect

The significant movements on affect categories are summarized in Table XIX which refers to the Gestalt therapy.

TABLE XIX

Changes on Affect Categories (Gestalt Therapy)

Category	Description	Level of Probability	Group Members Contributing to Shift	Group Members NOT Contributing to Shift	Comment
1	**POSITIVE.**	$p < 0.05$	Lana (GT 1) Sylvia (GT 2) Jane (GT 3) Vi (GT 6) Fritz (GT 7)	Mary (GT 4)* Lil (GT 5)**	The group emit more positive affect.
2	**NEUTRAL:** Objective	$p < 0.001$	Lana (GT 1) Lil (GT 5) Vi (GT 6) Fritz (GT 7)	Sylvia (GT 2)* Jane (GT 3)** Mary (GT 4)*	The group become more Objective.
4	**ANGER-HOSTILITY.**	$p < 0.01$	Sylvia (GT 2) Jane (GT 3) Mary (GT 4) Lil (GT 5) Vi (GT 6)	Lana (GT 1)** Fritz (GT 7)*	The group become more angry and hostile.

* Slight decrease (not significant)

** Slight decrease (greater than 100% change)

The above table illustrates that the Gestalt group, too, 'benefited' by therapy. Individual members increase their emission of positive emotional behaviours, and increase in their objective output. One group member (Lil GT5) significantly decreases in her emission of positive affect, and another member (Jane GT3) significantly decreases her emission of 'objective' behaviours. Aside from these two exceptions, the Gestalt therapy may be classified as an environment which enhances an increase in 'positive affect' and in 'objectivity'.

The Gestalt therapy may also be described as producing a general increase in 'anger-hostility' in its members. Only one member (Lana GT1) significantly changes to become less angry and hostile. Finally, no systematic or significant changes were detected for the Gestalt group members on the parameters of 'anxiety' or 'frustration'.

In general, the discovered changes in emotional behaviour of the GT group seem to fit the actual in-group activity. A progressive move, from about the middle of the treatment for the GT group, was observed: this move (towards an objective evaluation of the dyadic interactions of therapist and one group member) could possibly have led to an increase in objectivity post hoc. Also the general comradeship between members and the general 'air' of cooperation in the group sessions could have given rise to the increase of positive affect. The upshot is that these changes in emotional behaviour are treatment-induced. This does not seem to be so far removed from the reality of the situation.

The GT group significantly ($p = 0.05$) increase their emission of positive affect from the first to the second interview. No systematic or significant change on total negativism was discovered: About half the clients increase, and the other half decrease, and they cancel each other out.

As a final note on the changes on the affect categories for both groups, it might be illuminating to account for these changes in terms of a metaphor: 'the end of the affair'. On the one hand, the group-analytic treatment members were relieved to finish. In point of fact, the GAT group were so relieved to finish that only two members appeared for the last session. An 'air' of deliverance from the persecutor (the therapist or interviewer) pervaded the group, which may have encouraged the decrease in negative affect and the concomitant rise in objectivity. On the other hand, the "Gestalt" group, still embroiled in the 'affair' wished for a continuance. In fact, what they all seemed agreed on, in the post-treatment interviews, was the need for "more time" in therapy. Coupled with this was the comradeship and cooperation which developed and which might account for the rise in positive affect.

GAT and GT Group Changes on VAST: Themes

Appendix H contains the comprehensive results and tables of each client's change on the theme dimensions of the VAST system.

To simplify the discussion of results, the nine theme categories have been collapsed into two major dimensions: primary and secondary affiliation. For primary affiliation the themes revolve around references to close relatives, marriage, children and self. The themes in this system therefore are B (Self), E (Marriage), F (Parents) and G (Children). For secondary affiliation the themes in this system are A (Therapy), C (Therapist), D (Group-Peers), H (Work) and I (Other People).

Without belabouring the point, in every case there is a significant decrease in 'primary' affiliation and a corresponding increase in 'secondary'. This, of course, is not unusual in an interview of this nature, where the original intent was to determine if these patients learned anything about themselves or group dynamics or other people. Obviously, the post-treatment interview was organized such that it elicited information about the therapy, the therapist and group-peers. So, this change is not a surprising find. It does indicate, however, the influence of the interviewer in shaping and guiding the discussion, and this is the first interviewer-interviewee interaction effect. The topics discussed in the interview also had a part to play in the generation of emotional behaviour. The introduction of three 'new' themes (therapy, therapist and group-peers) undoubtedly influenced the emotional output in some unspecified and cloudy manner. What is clear at this point is that in the first interview the emotional behaviour emitted reflects the clients' 'domestic' problems, whereas, in the second interview the emotional behaviour may be thought of as a reaction to the therapy. The main implication of this generalization, is that one theme category remains relatively stable from pre- to post-interview; namely, the 'self' category. It is perhaps through the scrutiny of this category that a clear picture of group or individual movement will emerge.

An analysis of the 'self' category reveals, for the GAT group, no significant change on positive affect, and a significant decrease ($p < 0.01$) on all other affect categories. This tends to support the assertion made earlier that the GAT group 'as a whole' has 'benefited' by this particular therapy. For the GT group, also, these same changes apply, with the exception of no significant change on 'anxiety-fear'. These results, which also appear in Appendix H, tend to substantiate the earlier findings, where affect alone is considered. The exception to all of this is the positive affect category, where the number of acts emitted is rather low, and an analysis of both groups resulted in no significant move in either direction. Additionally, the change on 'objectivity' for the whole group is in the opposite direction when all themes are considered.

Individual Changes (GAT and GT)

The individual movements detected by the Verbal Affect Scoring Technique are presented in Tables XX and XXI for the GAT and GT groups, respectively. The scheme used here is based on the raw data (that is, percentages), and is simply a gain or loss chart.

TABLE XX

Individual Changes on Affect (Group-Analytic Treatment)

Sub-Group	Subject	Positive 1	Neutral-Objective 2	Anxiety-Fear 3	Anger-Hostility 4	Frustration-Depression 5
I	Lois	++	++	--	--	--
	Carol	+	++	--	-	--
II	Nancie	--	++	--	+	-
	Lucie	0	-	-	+	+
	Katie	0	+	+	+	-
III	Dean	-	-	+	+	+

KEY: ++ = large gain (i.e. more than 50% change)
+ = gain (i.e. more than 10% change)
0 = no change
- = loss (i.e. more than 10% change)
-- = large loss (i.e. more than 50% change)

TABLE XXI

Individual Changes on Affect (Gestalt Therapy)

Sub-Group	Subject	Positive 1	Neutral-Objective 2	Anxiety-Fear 3	Anger-Hostility 4	Frustration-Depression 5
I	Lana	+	++	--	--	--
	Vi	++	+	-	+	--
	Fritz	0	++	-	--	--
II	Sylvia	+	-	+	+	-
	Lil	--	+	-	+	+
III	Jane	++	--	++	++	+
	Mary	-	-	+	++	++

KEY: As for Table XX

It is interesting to note that the two survivors of the GAT treatment (Lois and Carol) -- survival in the sense of attending the last session -- were also the two people who learned or 'benefited' the most: they both increased on positive affect and objectivity and decreased on negativism. The two 'aggressive' females of the group, (Nancie and Lucie) that is, the ones most verbal in their attacks on the therapist, 'deteriorated'; although Nancie increased on objectivity. The only male member of the group (Dean), aside from the therapist, was quite objective in the first few group sessions, but was quickly 'pressured' into conforming to the norm of abusing the therapist, and on the VAST results may be said to have 'deteriorated' the most: he decreased on positive affect and objectivity, and this was accompanied by an increase in negativism. It is also interesting to note that Dean was the only person who didn't complete his post-treatment personality tests, despite constant 'hounding' by a senior member of the team of observers.

In the GT group, Vi, Lana and Fritz benefited most from the group encounter: they either increased or remained stable on positive affect, and decreased in negativism. Mary's emotional behaviour, however, indicates that she gained the least from this therapy: her condition may be said to have worsened. This may also be said of Jane, Lil and Sylvia. The latter two, however, did make some gains which may be termed therapeutic: Lil increased in objectivity and decreased in anxiety, whereas Sylvia increased on positivism and decreased on frustration. Jane, as previously mentioned, was hospitalized shortly after the conclusion of the therapy. She deteriorated dramatically in her ability to cope with her domestic situation, her feelings and life. This VAST result, therefore, might have been used to predict her 'mental' breakdown.

Interviewer-Interviewee Interaction Effects

Tables XXII and XXIII show how the interviewer's emotional behaviour changes from the first to the second interview. The figures given are percentages of total acts initiated. The major changes occur in categories 2, 4 and 5. The main conclusion which can be drawn from these results is that in the majority of cases a decrease in category 2 (objectivity) is accompanied by an increase in categories 4 (anger-hostility) and 5 (frustration-depression). The exceptions to this are Lois and Carol in the GAT group, and

TABLE XXII

Interviewer's Affect Categories by Client (Pre- to Post-Treatment): GAT

Affect Category	Nancie		Lucie		Lois		Katie		Carol		Dean	
	Pre	% Post	Pre	% Post	Pre	% Post	Pre	% Post	Pre	% Post	Pre	% Post
POSTIVE	4	2	7	5	5	5	6	6	1	2	12	8
NEUTRAL	91	89	88	73	83	83	88	63	90	95	80	62
ANXIETY	2	0.5	2	0.5	1	2	2	0.2	0.3	0.7	0	2
ANGER	2	6	1	9	7	8	1	28	2	3	5	16
FRUSTRATION	0.5	3	2	13	4	3	3	4	6	0.4	4	14

TABLE XXIII

Interviewer's Affect Categories by Client (Pre- to Post-Treatment): GT

Affect Category	Lana		Sylvia		Jane		Mary		Lil		Vi		Fritz	
	Pre %	Post	Pre %	Post	Pre %	Post	Pre %	Post	Pre %	Post	Pre %	Post	Pre %	Pos
POSTIVE	6	2	11	13	5	5	3	8	9	6	8	4	7	5
NEUTRAL	90	85	88	80	89	80	84	70	84	73	83	70	86	92
ANXIETY	1.5	0.8	0	0.3	2	0	0.8	0.9	3	1	3	0	3	0
ANGER	2	5	1	6	2	4	9	14	2	15	3	19	1	3
FRUSTRATION	0	7	0	1	2	9	4	7	3	6	3	6	3	0

Fritz in the GT group. This is indeed an interesting find, since these three clients are amongst those who 'benefited' most from their therapy. It now seems likely that an unexpected variable was involved in the change in emotional behaviour of the subjects. The rapport (or lack of) which developed between the clients and the interviewer was probably influential in the final outcomes of the VAST coding system. Consequently, the objectivity of the interview is questioned. The possible interviewer interference with the emotional behaviour of the clients is a serious flaw in the experimental design, a flaw which will be examined in depth in the final methodological critique in Chapter VI.

What is the nature of the relationship between the interviewer's emotional behaviour and that of the clients? The definitive answer to this question must remain obscure. But, by way of a partial answer, 60 percent of the changes by the GAT group on affect are in the same direction, but of different magnitude, as those of the interviewer. This compares with 63 percent for the GT group (see Appendix H). The major affect components involved in this comparison are categories 2 (objectivity), 4 (anger-hostility) and 5 (frustration-depression). Therefore, the tentative conclusions drawn about therapeutic advantages must be considered from the point of view of this 'new' variable.

Personality Factors and Emotional Behaviour

The rationale for this section must be clearly stated: first, to determine if there is a positive relationship between the results obtained by the personality tests for anxiety (16PF) and depression (MMPI) and the results on these dimensions obtained by the VAST analysis. Secondly, to investigate the feasibility of validating the VAST affect categories by such a comparison.

(a) Relationship between 16PF 'Anxiety' scores and 'Anxiety' (category #3) as measured by the VAST

The results of the calculation of 16PF 'Anxiety' scores for all clients are presented in Table XXIV. The anxiety score, as second-order Cattellian factor, was obtained by a weighted-score calculation on the sixteen first-order factors. Tables XX and XXI contain the changes on affect category #3 (anxiety-fear), which will be compared to the 16PF anxiety scores.

TABLE XXIV

16PF Anxiety Scores for All Clients

Treatment	Subject	Anxiety Pre- (Stens)	Anxiety Post- (Stens)	Change (Stens)
GAT	Nancie	6.33	4.89	-1.44
	Lucie	7.32	8.82	+1.50
	Lois	10.53	10.07	-0.46
	Katie	6.41	5.14	-1.27
	Carol	9.60	10.13	+0.53
GT	Lana	7.74	7.97	+0.23
	Sylvia	7.93	8.39	+0.46
	Jane	6.63	9.53	+2.90*
	Mary	5.87	4.51	-1.36
	Lil	9.96	8.32	-1.64
	Vi	7.99	7.95	-0.04
	Fritz	6.00	4.51	-1.49

* $p = 0.027$

A comparison of Tables XX and XXI with Table XXIV yields the following information: five subjects (Nancie, Lois, Lil, Vi and Fritz) decrease, and two subjects (Sylvia and Jane) increase on both measures of anxiety; two subjects (Katie and Mary) increase on VAST 'anxiety' and decrease on 16PF 'anxiety'; and three subjects (Lucie, Carol, and Lana) increase on 16PF 'anxiety' and decrease on VAST 'anxiety'.

A chi square test of independence on this data shows that the probability of this distribution is 0.50 or greater, which leads to the verdict that these two samples are not independent. In other words, the 16PF anxiety and VAST anxiety scores are not significantly different and could come from the same population. In a word, the two "tests" 16PF and VAST are measuring the same thing: anxiety.

(b) Relationship between MMPI 'Depression' scores and VAST 'Depression Tallies'

Table XXV shows the MMPI depression scores for all subjects. None of these clients change significantly on this MMPI scale. Again, a comparison of Tables XX and XXI with Table XXV gives the following information: first, five subjects (Nancie, Katie, Lana, Sylvia and Vi) decrease, and one subject (Mary) increases, their scores on both measures of 'depression'; two subjects (Jane and Lil) increase on VAST depression and decrease on MMPI 'depression'; two subjects (Lois and Carol) increase on MMPI degression and decrease on VAST depression; finally, two people (Lucie and Fritz) do not change on MMPI depression, but increase and decrease on VAST Depression, respectively.

A chi square test of independence on this data reveals a

TABLE XXV

Depression Scores on MMPI for all Clients

Treatment	Subject	Depression Scores (Adjusted)		Change
		PRE-	POST-	
Group-Analytic Treatment	Nancie	35	29	-6
	Lucie	37	37	0
	Lois	36	38	+2
	Katie	30	24	-6
	Carol	37	39	+2
Gestalt Treatment	Lana	37	33	-4
	Sylvia	27	24	-3
	Jane	44	38	-6
	Mary	29	32	+3
	Lil	29	23	-6
	Vi	32	26	-6
	Fritz	15	15	0

level of probability of p = 0.40, which again indicates correspondence between the two measures of depression. That is, the MMPI scale (#2) and the VAST category (#5) are measuring the same thing: depression.

These results, therefore, are supportive of the earlier hypotheses of a correspondence between personality traits such as 'anxiety' and 'depression', and the emotional behaviour which was categorized under these rubrics. Thus, in the final analysis, categories #3 and #5 of the VAST system have been validated independently - they have a demonstrated concurrent validity.

Summary

Changes in the emotional behaviour of individuals and groups have been discovered, which may be ascribed to the treatments received. The cautions to be aware of in interpretations are (1) client-interviewer interference effects, and (2) the transferability of such 'learnings' or changes to the clients' everyday situations. Such changes are contrary to the clinical 'intuition' of those who observed the actual therapies in progress. Hence, the hidden reality of therapeutic movement emerges. Theme changes coupled with the nature of the pre- and post-interviews undoubtedly influenced the generation of emotional behaviour.

There is a significant relationship between the personality variables of anxiety and depression, and the VAST operational definitions of these terms. This provides evidence of concurrent validity for both the VAST technique and the 16PF and MMPI.

Finally, the Verbal Affect Scoring Technique has shown itself to be an adequate and useful tool for the evaluation of therapeutic movement evinced in pre- and post-treatment interviews.

CHAPTER VI

SUMMARY OF FINDINGS, METHODOLOGICAL CRITIQUE AND IMPLICATIONS FOR EDUCATION AND PSYCHOLOGY

This chapter will address itself to a summary of the findings of the personality trait analysis (Chapter IV), and the VAST analysis (Chapter V). The methodological critique is an attempt to bridge the gap between the short-comings of this experiment and the definitive experiment for research projects concerned with outcome studies. Finally, the implications of this study for education and psychology are advanced.

Summary Statement

The detailed item analyses of the personality tests (16PF & MMPI) show that no systematic changes in the basic personality traits ('source' or 'surface') of the clients undergoing either of the two treatments occurred. Individuals, however, did 'learn' isolated and seemingly unconnected 'bits' of information. But the case has been made that these were random and unsystematic; that is to say, not treatment-specific and not necessarily treatment-induced. The case could be argued, however, that certain of these changes reflect a temporary preoccupation with the therapy. Movements on the personality factors have either been explained as random fluctuations in response to the questions, or as temporary mood or affect oscillations, or as artefacts of the administration of the tests. It has been suggested that the temporary mood or affect changes influenced the clients' responses but seem to have no correlate in the personality traits. The available evidence gave rise to the conclusion that personality change as a result of exposure to small group psychotherapy is a fiction.

Changes in the emotional behaviour of the clients, as measured by VAST, were detected. These changes were corroborated by the concomitant change on other 'emotional' measuring devices. A correspondence was discovered between the VAST measure of 'anxiety' and 'depression' and the 16PF second-order factor of 'anxiety' and the MMPI scale of 'depression'. Interviewer-client interference effects were discovered, which may (or may not) invalidate the initial findings. The Verbal Affect Scoring Technique has shown itself to be an adequate 'new' tool for measuring emotional behaviour as generated in clinical interviews. Finally, to say that the emotional behaviour of the clients changed in this-or-that direction as a result of therapy is extremely difficult, especially in the light of the methodological flaws of this experiment.

Methodological Critique

This section may be aptly labelled the coup de grâce of the thesis. Here the experiment will be dissected, and a constructive commentary on its inherent weaknesses and strengths made. This study's innovations, its contributions to outcome studies, and its implications for the study of small groups and psychology as the 'science' of human behaviour will be given.

The majority of conclusions reached by research workers in the field of small group therapy have resulted in what Paul (1967) has described as "research errors", that is to say, the discrepancies between what is concluded and what ought to be concluded from the empirical data at hand. With this discrepancy at the back of his mind, the author performed the item analysis of the 16PF and the MMPI. The affect-theme analysis is also testimony to this modus operandi. The author was not content to report personality trait changes on averaged data, and was not satisfied with unsystematic, intuitive judgements about who learned. He was attempting to uncover the realities of therapeutic movement.

Indeed, it appears that the preliminary findings on the personality tests versus the contrary findings of the item analyses, seem to sharply focus this very issue of what is, and what ought to be, concluded. The crux of the personality section was, therefore, the subterranean meanderings, from the apparently obvious to the obscured reality. Item analyses, as a general rule, allow the psychological meaning of personality 'factors' to be probed and clarified, and enable a taxonomic description of the group and individual 'learnings' to be performed.

The next question which requires attention is concerned with the definitive measurement of personality change. What are the instruments that need to be used? Obviously, more sensitive instruments are required so that personality trait fluctuations over short time intervals are uncovered. Cattell (1966b) is aware of this need, and points out a possible solution to the dilemma as being a "psychometric depth analysis". He means a "battery of factored source trait scales such as the 16PF, and a set of surface trait, syndrome-severity scales such as the MMPI" (p. 86). But this study has shown this recommendation to be inadequate. What is needed is an in-depth item analysis of the sort proposed by this author. The ultimate solution would no doubt involve a vast number of questions and a computer analysis of the anticipated changes rather than the analysis-by-hand which this author conducted.

The author would concur with Cattell (1966b) when he suggests that it is "naive to set out to measure therapeutic change on a single dimension of sickness-to-health" (p. 86). In short, we need to develop a series of instruments -- like the VAST -- to cover the broad spectrum of change dimensions. Above all, we need objective and systematic instruments to be able to uncover the reality of either psychotherapeutic movement or actual learnings.

The selection of specific outcome criteria generally involves a value judgement of some sort, and for a majority of outcome studies the criteria used to determine success or failure revolve around the whims and fancies of the investigator. While multiple measures of outcome are necessary, the overriding variable to be investigated in psychotherapy groups must of necessity (pace Cattell) be the changes in the disturbing and distressing behaviours which brought the client to therapy in the first place.

Certain unexpected variables made large in-roads into this experiment. The most notable was the influence of the 'observers', who through vicarious involvement also received a 'treatment'. One of the observers also conducted the testing and the pre- and post-treatment interviews. Perhaps at this stage the 'total' experiment ought to be described.

The treatments were held in a laboratory which was equipped with a one-way mirror and dividing wall. The observers were stationed behind the one-way mirror, and two observers carried out a Balesian IPA analysis of the 'live' on-going group action. The other three observers were engaged in a holistic, clinical evaluation of the two therapies. After the two evening therapies were concluded all five observers adjourned for a one-hour debriefing session. During this time hypotheses and predictions about the next sessions were made. Additionally, a discussion and evaluation of the two evening sessions was carried out. Topics of discussion included questions and answers about who in the two treatments had learned anything, what both therapists were planning to do next, what the Bales' IPA "spd's" might be, etc., etc. It became apparent at a later date that these 'after group sessions' were in reality part of a total group dynamic.

The observers were receiving what amounted to an 'all-embracing' therapy. The three major parts were (a) Vicarious Gestalt therapy; (b) Vicarious Group-Analytic therapy; and (c) the 'after group sessions': the total being considerably greater than the sum of the parts. This type of observer treatment has been described at length by Park (1971), and he posited that vicarious involvement in training-groups led to a greater learning about group dynamics and processes. The way this treatment influenced this experiment is for the most part obscure. However, since the interviewer was one of the observers it undoubtedly influenced the outcome study. It is this last point which the author wishes to develop at length. But, before doing so, the hypotheses which were made by the observers require a brief summary, especially those which influenced the interviewer.

Hypotheses for the Group-Analytic Treatment: An Abridged Sample

Katie wants to get her problem solved and as a result will be shot down by the others (session 1 -- false).

There will be an increase in negativism during the second session, especially by Nancie and Katie (session 1 -- true).

Dean, in the third session, will attack the negativism of Nancie and Katie (session 2 -- false).

Lois will react very negatively towards Dean (session 2 -- false).

The therapist is a positive reinforcer for Lois because he expresses a lot of her own feelings about other group members. Lois is pro-therapist (session 3 -- seems half true).

Dean has established himself as an interpreter for the therapist's comments. He, too, may receive some of Lucie, Katie and Nancie's negativism (session 3 -- true from time to time).

Lois and therapist will successfully extinguish Nancie's anti-therapist negativism (session 3 -- false).

Pro- and anti-therapist split will widen. Focus will be more on in-group behaviour (session 3 -- false).

The group in general is reinforced by suffering. "Let's attack each other because that's all we know and that's all we're good for". This attacking behaviour will continue (session 4 -- may be some truth here with regard to group versus therapist).

The group is still unprepared to deal with the 'here and now' (session 5 -- true).

Dean fears the women because of their treatment of the therapist (session 6).

Dean can't tolerate criticism and will continue to play the sick role (session 7 -- true until the last week).

Lois is becoming very task oriented and will be the leader of the work ethic (session 8 -- false).

Carol will learn nothing (session 10 -- ??).

Therapist will 'trigger' on the trio of Lucie, Dean and Nancie (session 14 -- false).

No learning has taken place (session 16).

Nancie, Lucie and Katie will increase attack on the therapist. They are setting up a plea of irresponsibility. They need to do this because Dean's attack has raised doubts in their minds about their own responsibility. They must convince themselves that it is not their fault (session 17 -- true).

Hypotheses for the Gestalt Treatment: An Abridged Sample

It will be difficult for the therapist to control this group (session 1 -- half true).

Lana will attempt to lead an attack on Lil in session 3 (false).

The therapist succeeded in setting himself up as positive reinforcer (session 2).

The Gestalt group will learn how to reflect feelings. They will also be much more open and willing to confront (session 2 -- false).

The Gestalt therapist is having trouble controlling the group. The task of dealing with the emotions in the here-and-now has been resisted by Lana, Lil, and Mary. Lil feels uncomfortable dealing with emotions. The therapist's presentation is turning the group off. He tends to be too cognitive, no cueing or modelling, and as a result relatively few task operants have been emitted (session 3).

The therapist is backing down from the aggressive girls and 'clobbering' the silent girls in confrontations (session 4 -- true).

The therapist's professionalism (appearance) is an aversive stimulus to the group (session 5 -- true).

Fritz will blow his stack (probably on 'good old dad') before the sessions conclude (session 6 -- false).

Therapist is still meeting continual resistance to his talk and he will express frustration, negativism and bitterness by arriving a couple of minutes late (session 9 -- true).

The therapist is turning from the use of terms such as where and what (from experiential and affective phrasing) to terms such as how and why (to past-considering, cognitive phrasing). The language change is in line with the change in modus operandi (session 10).

The therapist acts like a "con" man. He has a bag of verbal tricks which is seducing the naive members (Fritz, Vi, Jane and to some extent Sylvia) into believing they are getting help. The more sophisticated members (Mary, Lana and Lil) will confront the therapist about his lack of investment. These people are saturated with the therapist's bag-of-tricks (session 12 -- true with Mary in session 13).

The therapist doesn't have the theroetical background to back-up his bag-of-tricks (session 12 -- seems true).

The therapist is preying on 'cripples'. He won't successfully confront Lana or Mary in a sustained manner (session 12 -- true).

The GT group think they are getting therapy, the GAT doesn't. The GT group equate therapy with excessive show of emotion in the presence of a trained authority, and officially sanctioned by the authority figure. Without sanction it isn't therapy. There must be a tender-loving, involved therapist (session 14).

There exists a sacred relationship in the members' minds between the therapist and the group members. When dyadic interaction is operating no one will intervene for fear of violating this sacred ritual (session 19 -- maybe).

The ramifications of this relates to the influence the 'extra' treatment had on the interviewer. The general tone of the above percolated into the post-treatment interview as the following extracts indicate. In general, the additional vicarious and direct therapy, which the observers received, generated hostility and frustration. This negativism was directed towards the GT therapist and some of the GT members (notably Lil, Mary and Lana), and towards the GAT clients (with the possible exception of Lois). The following segments from the post-treatment interviews illustrate the emotional involvement of the interviewer, and the transference of ideas and biases from the 'extra' therapy.

Segment of Interview with Katie (GAT) after completion of Therapy

Interviewer (I): Doesn't it surprise you in any way that the group would seem to feel that they just had to be negative in that group? That they couldn't say anything positive about each other, or about the doctor? Isn't that surprising in any way? Considering that the doctor never really said anything of that nature -- that the group had to be negative.

Katie (K): Well ...

I: (interrupting and overriding) So, did you find that surprising in any way?

K: Yes and no, because I kind of — it didn't have to be all negative. But it didn't have to be all positive either.

I: But it was all negative, wasn't it?

K: It was a negative feeling.

I: (emphatically) There was no positivism in that group whatsoever, either towards each other or towards the doctor ... (pleading) ... did you think?

K: I don't think so.

I: Who was positive to who?

Segment of Interview with Fritz (GT) after Therapy

Interviewer (I): I was wondering if you saw any, ah, gimmicks, or little tricks, or little unique expressions, or kind of clichés that he (the therapist) might use in the group? Sort of different ways of talking, and (brief pause) ... different from the other members, perhaps.

Fritz: Well, ah, some of the clichés he did use were those of a person who'd travelled, ah, I think. Ah, it would be, ah, a type of speech using idiosyncrasies which would be quite familiar with a person familiar with the British people.

I: Well, he was an Australian.

Segment of Interview with Vi (GT) after Therapy

Interviewer (I): Do you think the doctor treated everyone equally?

Or do you think he had his favourites, and those he would pick-on and focus-in on?

Vi (V): I don't know if he had his favourites. But I think he was on guard with certain people.

I: Such as?

V: Well, Lil for one, because she seemed to ...

I: (interrupting) She seemed to be able to handle it quite well, didn't you think?

V: Yeah.

I: Do you think that this explains why Lil was about the only member of the group who never really got involved in any of the experiences? Mostly was on the outside looking in, making comments like the doctor. Did you get that feeling about her?

V: Yeah, I think so. Yeah, I would say I-I ...

I: (interrupting) The doctor steered pretty clear of her.

V: Well, ah, I don't know if he -- sometimes I guess he would. But when she did talk he was -- well, on his guard.

....

I: The rest of the time didn't you think she (Lil) played a rather 'Doctor's right-hand-woman' kind of role?

V: Um-huh.

I: Coming in whenever the doctor needed help. Or generating discussion whenever things were getting low. And then the doctor would come in and give them some ammunition.

V: Um-huh.

I: Did you get this impression?

V: Yes.

In summary, the interviewer shapes the conversation of each client in that he gives cues and clues about the therapy. He superimposes his own value judgements, biases and propensities. Additionally, he becomes 'caught-up' in the emotional climate of the interviews. This is illustrated in the change in his emission of emotional behaviours, as outlined in Chapter V, from the pre- to the post-interview.

In the introductory chapter, reference was made to the 'unbiased' and detached observers, to the fact that they were at least one step removed from the emotional climate of the therapies, and that this implied objectivity and proximity to the reality of the situation. This premise appears to be on shaky ground, especially in the light of the influence of the 'observer group' on the objectivity of the interviews. Certainly, objectivity was lost in the interviews and this points to the need for a 'neutral' interviewer. One of the main premises of investigating outcomes of psychotherapy is that the treatment should be evaluated externally, by research workers not involved with the on-going group activity. This premise must still be upheld as valid. It is the author's contention that trained observers, using a systematic analytical scheme, rather than the holistic clinical appraisal method, can in fact reveal the underlying truth of group change. Additionally, the trained observer can take into account his vicarious involvement and prejudices when formulating his conclusions and recommendations. In this study, therefore, these influences have been taken into account.

Recommendations for Eliminating Methodological Flaws

1. All people involved with the therapy, including therapists, clients and observers, should be tested (pre- and post-) with standard, objective tests. Additionally, they should undergo a pre- and post-treatment interview.
2. Testing and interviewing should precede and follow treatment, and also should be carried out at a later date to see whether or not the treatment has any lasting effects.
3. A standard interview should be administered by a 'neutral' interviewer; that is, someone not observing therapies and not in contact with either the experiment or anyone concerned with it. The standard interview should consist of two parts: first, the problems which brought the client to therapy in the first instance — their domestic afflictions, etc. In the post-treatment interview this section should be devoted to possible amelioration of personal problems, etc. The second part of the interview should be devoted to expectations of the therapy in the first interview, and reactions to the therapy in the post-interview. This would eliminate the drastic theme changes.

Summary of Methodological Critique

All the available evidence points to the experiment as being a failure. But this is not the case. In the first place, methodological flaws have been pointed out which future research will undoubtedly avoid. Secondly, the VAST technique is sufficiently sensitive to detect such flaws as interviewer-client interference effects, which cannot be said of the 16PF or the MMPI.

Finally, the results illustrate that certain people 'benefit' by, or learn from, the experience, whereas others do not. In retrospect, this experiment tends to sharpen the need for specific therapies for specific people. The ultimate question for research on group psychotherapy, therefore, is:

> "What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?"
> (Paul, 1967, p. 111)

Hopefully, with the careful application of the appropriate methodology and strategy, in twenty more years of research (cf. Eysenck's 1952a study) we may find psychotherapy to be no longer an undefinable technique applied to vague problems with unpredictable outcome, without due regard to the real needs of the patient.

Implications.

The major thrust of this thesis relates to the nature of the discrepancy between the goals and objectives of the two therapists, and the actual outcomes or learnings of the clients. In the first place, the therapists attempted to ameliorate dysfunctional behaviour by their emphasis on emotional behaviour. On the other hand, the clients either failed to move (personality traits) or moved on dimensions (VAST) which the therapists had not aimed for. This has occurred in most of the groups observed and almost certainly happens to the ordinary classroom teacher without his (her) awareness. It suggests that there is a need to systematically analyze the methods of instruction, curricula and therapies currently in vogue. Obviously, analysis of this more elaborate kind would throw light on the processes and dynamics which impede "learning" in social and educational settings. More particularly, we ought to address our attention to the question: Why is learning in a school setting retarded or facilitated? It is proposed that a scheme, such as VAST, might be developed by which net outcomes are readily obtained, and indeed which would illuminate the advantages and disadvantages of a given teaching method or specified group therapy.

Another important aspect of this thesis pertains to the elimination of methodological flaws in experiments of this sort. Future research on outcomes of group psychotherapy should incorporate the proposals outlined previously. Additionally, for an experiment of an ideal kind, we should have a larger sample -- more groups and more subjects in each group. The client-interviewer 'interference' effect requires attention. Aside from the need for a neutral interviewer, there is a need for sampling the client's emotional behaviour. This could be achieved by having four or five interviews prior to, during the process of, and following, therapy. A developmental picture of the client's emotional behaviour could thus be acquired and related to the outcomes of therapy.

A further implication for education concerns the VAST system. This technique sensitizes the user to verbal emotional behaviour. It could be modified to produce a didactic device, which could be used to 'train' counsellors and teachers to detect and understand the emotional reactions of their clients or students. For counsellors of Rogerian persuasion, this suggestion would help them to learn the skill of empathy. This would facilitate the procedure of 'reflecting' back to the client his (her) feelings.

The major implications for psychology are the methodological study, the item-analyses and the development of the affect-theme coding system.

The VAST system is an attempt to operationalize expressive emotional behaviour which could be used in similar ways with students and clients. It is expected that the next stage in the development of the VAST system is to encompass all communicative behaviour, which would necessitate the analysis of video-tapes. The study of Ekman, et al. (1972) could profitably be incorporated into a modified Verbal and Facial Affect Coding System.

The methodological technique of item-analysis also proved to be valuable in that factitious personality changes were reduced to their hidden reality -- that they had no psychological meaning. This technique, therefore, is perhaps an essential ingredient for future research work, especially on personality assessment and description.

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APPENDIX A

TEST-RETEST RELIABILITY OF THE MMPI SCALES.

TABLE A.1

Test-Retest Reliability of the MMPI Scales Derived from this sample (N =12) over a One-Month Period. (Pearson's 'r' Coefficient)

SCALE		RELIABILITY
Hypochondriasis	(Hs)	0.85
Depression	(D)	0.91
Hysteria	(Hy)	0.90
Psychopathic Deviate	(Pd)	0.87
Masculinity-Femininity	(Mf)	0.93
Paranoia	(Pa)	0.89
Psychasthenia	(Pt)	0.95
Schizophrenia	(Sc)	0.99
Hypomania	(Ma)	0.82
Social Introversion	(Si)	0.84

APPENDIX B

RESULTS of PERSONALITY TESTS

TABLE B.1

Results of Pre-Test and Post-Test: 16PF Mean Scores.

FACTOR			GROUP-ANALYTIC THERAPY		GESTALT THERAPY		GRAND MEAN	
NO.	SYMBOL	NAME	PRE-(N=6)	POST-(N=6)	PRE-(N=7)	POST(N=7)	PRE-(N=13)	POST-(N=13)
1	A	Outgoing	3.83	4.33	4.14	5.29 *	4.00	4.85 *
2	B	Intelligent	6.67	7.17	7.14	7.14	6.92	7.15
3	C	Stable	2.67	2.50	3.14	2.86	2.92	2.69
4	E	Assertive	4.83	4.17	5.17	6.86 **	5.23	5.62
5	F	Happy-go-lucky	5.33	5.50	5.57	6.00	5.46	5.77
6	G	Conscientious	4.50	4.33	5.71	4.86 *	5.15	4.62 *
7	H	Venturesome	4.17	4.17	5.00	4.57	4.62	4.39
8	I	Tender-Minded	6.50	6.17	5.00	5.29	5.69	5.69
9	L	Suspicious	7.67	6.83 **	6.29	6.86	6.92	6.85
10	M	Imaginative	6.00	6.50	6.43	5.71	6.23	6.08
11	N	Shrewd	4.67	4.33	4.43	4.57	4.54	4.46
12	O	Apprehensive	7.67	7.67	7.14	7.57	7.39	7.62
13	Q1	Experimental	5.33	5.50	5.43	5.43	5.39	5.46
14	Q2	Self-Sufficent	6.50	7.67	6.14	5.00 *	6.31	6.23
15	Q3	Controlled	3.67	2.83	4.29	4.43	4.00	3.69
16	Q4	Tense	7.83	8.00	7.14	6.57	7.46	7.23

** $p \leq 0.01$ * $p \leq 0.05$

TABLE B.2

Results of Pre-Test and Post-Test: MMPI Mean Scores.

FACTOR			GROUP-ANALYTIC THERAPY		GESTALT THERAPY		GRAND MEAN. (GAT + GT)	
NO.	SYMBOL	NAME	PRE-(N=6)	POST-(N=6)	PRE-(N=7)	POST-(N=7)	PRE-(N=13)	POST(N=13)
1	Hs	Hypochondriasis	16.83	16.67	17.14	14.71	17.00	15.62
2	D	Depression	35.50	34.17	30.43	27.29 *	32.77	30.46 *
3	Hy	Hysteria	26.67	25.50	26.14	22.14	26.38	23.69
4	Pd	Psychopathic Deviate	34.17	31.17	27.29	25.43	30.46	28.08
5	Mf	Masculinity-Femininity	37.83	37.67	36.57	36.57	37.15	37.07
6	Pa	Paranoia	15.50	14.67	12.57	11.43	13.92	12.92
7	Pt	Psychasthenia	43.83	41.00 **	35.14	31.71	39.15	36.00 **
8	Sc	Schizophrenia	47.17	43.50	32.14	28.00 *	39.08	35.15 **
9	Ma	Hypomania	22.00	22.17	20.57	18.71	21.23	20.31
10	Si	Social Introversion	41.00	44.17	30.57	32.43	35.38	37.85

** $p \leq 0.01$ * $p \leq 0.05$

TABLE B.3

SUMMARY OF ANALYSIS OF VARIANCE: FACTOR L 16PF (GAT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	24.25	11	2.21		
Within	2.50	6	0.42		
D (Treatment Pre- to post)	2.08	1	2.08	25	0.005
Residual (Error)	0.42	5	0.08		

TABLE B.4

SUMMARY OF ANALYSIS OF VARIANCE: FACTOR A 16PF (GT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	30.86	13	2.37		
Within	9.00	7	1.29		
D (Treatment Pre- to post-)	4.57	1	4.47	6.19	0.046
Residual (Error)	4.23	6	0.74		

TABLE B.5

SUMMARY OF ANALYSIS OF VARIANCE: FACTOR E 16PF (GT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	36.36	13	2.80		
Within	7.50	7	1.07		
D (Treatment Pre- to Post-)	5.79	1	5.79	20.25	0.004
Residual (Error)	1.71	6	0.29		

TABLE B.6

SUMMARY OF ANALYSIS OF VARIANCE: FACTOR G 16PF (GT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	40.86	13	3.14		
Within	5.00	7	0.71		
D (Treatment Pre- to Post-)	2.57	1	2.57	6.35	0.044
Residual (Error)	2.43	6	0.41		

TABLE B.7

SUMMARY OF ANALYSIS OF VARIANCE: FACTOR Q2 16PF (GT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	41.43	13	3.19		
Within	8.00	7	1.14		
D (Treatment Pre- to Post-)	4.57	1	4.57	8.00	0.029
Residual (Error)	3.43	6	0.57		

TABLE B.8

SUMMARY OF ANALYSIS OF VARIANCE: SCALE 7 MMPI (GAT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	400.92	11	36.45		
Within	31.50	6	5.25		
D (Treatment Pre- to Post-)	24.08	1	24.08	16.24	0.011
Residual (Error)	7.42	5	1.48		

TABLE B.9

SUMMARY OF ANALYSIS OF VARIANCE: SCALE 2 MMPI (GT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	869.71	13	66.90		
Within	71.00	7	10.14		
D (Treatment Pre- to Post-)	34.57	1	34.57	5.69	0.050
Residual (Error)	36.43	6	6.07		

TABLE B.10

SUMMARY OF ANALYSIS OF VARIANCE: SCALE 8 MMPI (GT GROUP)

SOURCE OF VARIATION	SS	DF	MS	F	p
Total	1054.93	13	81.15		
Within	127.50	7	18.21		
D (Treatment Pre- to Post-)	60.07	1	60.07	5.35	0.050
Residual (Error)	67.43	6	11.24		

APPENDIX C

CLIENTS' 16PF and MMPI SCORES and PROFILES

16 P F TEST PROFILE

Name: ______

Comments: ______

FACTOR	Raw Score Form A	Raw Score Form B	Raw Score Total	Standard Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) 1 2 3 4 ← Average → 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A					RESERVED, DETACHED, CRITICAL, ALOOF (Sizothymia)	A	OUTGOING, WARMHEARTED, EASY-GOING, PARTICIPATING (Affectothymia, formerly cyclothymia)
B					LESS INTELLIGENT, CONCRETE-THINKING (Lower scholastic mental capacity)	B	MORE INTELLIGENT, ABSTRACT-THINKING, BRIGHT (Higher scholastic mental capacity)
C					AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET (Lower ego strength)	C	EMOTIONALLY STABLE, FACES REALITY, CALM, MATURE (Higher ego strength)
E					HUMBLE, MILD, ACCOMMODATING, CONFORMING (Submissiveness)	E	ASSERTIVE, AGGRESSIVE, STUBBORN, COMPETITIVE (Dominance)
F					SOBER, PRUDENT, SERIOUS, TACITURN (Desurgency)	F	HAPPY-GO-LUCKY, IMPULSIVELY LIVELY, GAY, ENTHUSIASTIC (Surgency)
G					EXPEDIENT, DISREGARDS RULES, FEELS FEW OBLIGATIONS (Weaker superego strength)	G	CONSCIENTIOUS, PERSEVERING, STAID, MORALISTIC (Stronger superego strength)
H					SHY, RESTRAINED, TIMID, THREAT-SENSITIVE (Threctia)	H	VENTURESOME, SOCIALLY BOLD, UNINHIBITED, SPONTANEOUS (Parmia)
I					TOUGH-MINDED, SELF-RELIANT, REALISTIC, NO-NONSENSE (Harria)	I	TENDER-MINDED, CLINGING, OVER-PROTECTED, SENSITIVE (Premsia)
L					TRUSTING, ADAPTABLE, FREE OF JEALOUSY, EASY TO GET ALONG WITH (Alaxia)	L	SUSPICIOUS, SELF-OPINIONATED, HARD TO FOOL (Protension)
M					PRACTICAL, CAREFUL, CONVENTIONAL, REGULATED BY EXTERNAL REALITIES, PROPER (Praxernia)	M	IMAGINATIVE, WRAPPED UP IN INNER URGENCIES, CARELESS OF PRACTICAL MATTERS, BOHEMIAN (Autia)
N					FORTHRIGHT, NATURAL, ARTLESS, UNPRETENTIOUS (Artlessness)	N	SHREWD, CALCULATING, WORLDLY, PENETRATING (Shrewdness)
O					SELF-ASSURED, CONFIDENT, SERENE (Untroubled adequacy)	O	APPREHENSIVE, SELF-REPROACHING, WORRYING, TROUBLED (Guilt proneness)
Q_1					CONSERVATIVE, RESPECTING ESTABLISHED IDEAS, TOLERANT OF TRADITIONAL DIFFICULTIES (Conservatism)	Q_1	EXPERIMENTING, LIBERAL, ANALYTICAL, FREE-THINKING (Radicalism)
Q_2					GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group adherence)	Q_2	SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3					UNDISCIPLINED SELF-CONFLICT, FOLLOWS OWN URGES, CARELESS OF PROTOCOL (Low integration)	Q_3	CONTROLLED, SOCIALLY PRECISE, FOLLOWING SELF-IMAGE (High self-concept control)
Q_4					RELAXED, TRANQUIL, UNFRUSTRATED (Low ergic tension)	Q_4	TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT (High ergic tension)

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of adults

FIGURE C.1

16 PF, Forms A and B, Copyright © 1956, 1957, 1961, 1962, 1967, Institute for Personality and Ability Testing, 1602-04 Coronado Drive, Champaign, Illinois, U.S.A. All property rights reserved. Printed in U.S.A.

[illegible]

Profile and Case Summary

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

F
Female

Name__________

Address__________

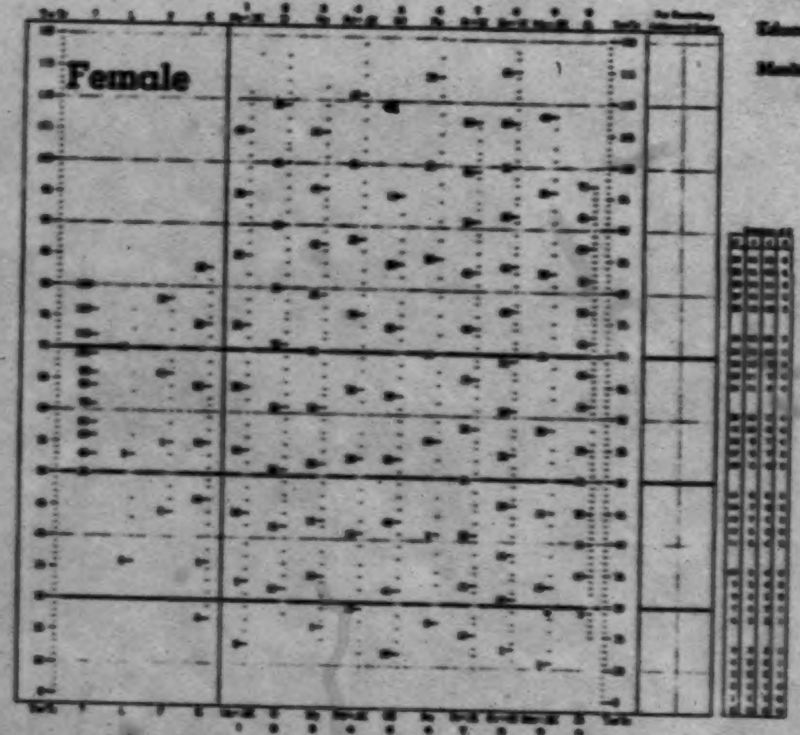
Occupation__________ Date Tested__________

Education__________ Age__________

Marital Status__________ Referred by__________

NOTES

Scorer's Initials__________



Raw Score__________

K to be added__________

Raw Score with K__________

Signature__________ Date__________

FIGURE C.II

TABLE C.1

16PF and MMPI Scores Pre- and Post-Treatment

NANCIE (GAT 1)

	16PF (Sten)	
Factor	Pre-	Post-
A	7	7
B	8	10
C	2	2
E	6	6
F	7	7
G	5	4
H	5	5
I	8	9
L	7	6
M	6	9 *
N	4	3
O	7	6
Q1	8	7
Q2	4	7 *
Q3	3	3
Q4	6	5

	MMPI (Adjusted Score)	
Scale	Pre-	Post-
Hs	12	9
D	35	29
Hy	22	18
Pd	36	34
Mf	39	39
Pa	16	13
Pt	35	32
Sc	36	33
Ma	18	16
Si	36	36

* p = 0.023

TABLE C.2

16PF and MMPI Scores Pre- and Post-Treatment

LUCIE (GAT 2)

16PF (Stens)

Factor	Pre-	Post-
A	4	7 *
B	8	8
C	2	1
E	4	5
F	9	8
G	3	5
H	7	7
I	5	6
L	7	6
M	6	6
N	4	5
O	6	6
Q1	2	4
Q2	8	10
Q3	5	3
Q4	8	8

MMPI (Adjusted Score)

Scale	Pre-	post-
Hs	14	14
D	37	37
Hy	27	22
Pd	42	34
Mf	43	38
Pa	18	12 **
Pt	49	45
Sc	54	41 *
Ma	29	28
Si	33	41

* $p = 0.023$

** $p = 0.035$

TABLE C.3

16PF and MMPI Scores Pre- and Post-Treatment

LOIS (GAT 3)

16PF (Stens)

Factor	Pre-	Post-
A	1	1
B	5	8*
C	2	2
E	6	5
F	2	4
G	4	4
H	1	1
I	7	5
L	10	9
M	3	3
N	8	8
O	10	9
Q1	8	7
Q2	9	9
Q3	3	3
Q4	10	10

MMPI (Adjusted Scores)

Scale	Pre-	Post-
Hs	17	21
D	36	38
Hy	26	31
Pd	33	34
Mf	27	30
Pa	13	13
Pt	46	44
Sc	59	57
Ma	24	22
Si	58	59

* p = 0.023

TABLE C.4

16PF and MMPI Scores Pre- and Post-Treatment

KATIE (GAT 4)

16PF (Stens)

Factor	Pre-	Post-
A	2	2
B	7	5
C	6	7
E	5	3
F	5	5
G	7	6
H	7	7
I	5	3
L	6	5
M	6	4
N	7	5
O	5	6
Q1	7	7
Q2	7	7
Q3	6	4
Q4	5	6

MMPI (Adjusted Scores)

Scale	Pre-	Post-
Hs	14	10
D	30	24
Hy	20	20
Pd	29	21
Mf	41	40
Pa	15	16
Pt	38	34
Sc	34	30
Ma	16	18
Si	33	33

TABLE C.5

16PF and MMPI Scores Pre- and Post-Treatment

CAROL (GAT 5)

16PF (Stens)			MMPI (Adjusted Scores)		
Factor	Pre-	Post-	Scale	Pre-	Post-
A	6	6	Hs	22	24
B	4	4	D	37	39
C	2	1	Hy	31	28
E	6	4	Pd	32	31
F	6	6	Mf	37	39
G	4	4	Pa	18	21
H	4	4	Pt	47	44
I	5	6	Sc	51	51
L	9	8	Ma	20	24
M	4	8*	Si	39	49
N	3	4			
O	9	10			
Q1	3	4			
Q2	5	7			
Q3	1	1			
Q4	8	9			

*p = 0.004

TABLE C.6

16PF and MMPI Scores Pre- and Post-Treatment

LANA (GT 1)

16PF (Stens)			MMPI (Adjusted Scores)		
Factor	Pre-	Post-	Scale	Pre-	Post-
A	6	6	Hs	30	21 *
B	7	7	D	37	33
C	2	3	Hy	41	29 ***
E	7	9	Pd	39	34
F	3	6 **	Mf	36	36
G	9	7	Pa	15	14
H	7	5	Pt	39	30
I	5	4	Sc	39	30
L	7	7	Ma	23	23
M	6	2 ****	Si	21	29
N	3	4			
O	9	10			
Q1	4	4			
Q2	4	3			
Q3	4	4			
Q4	6	4			

* p = 0.033

** p = 0.023

*** p = 0.017

**** p = 0.004

TABLE C.7

16PF and MMPI Scores Pre- and Post-Treatment

SYLVIA (GT 2)

16PF (Stens)			MMPI (Adjusted Scores)		
Factor	Pre-	Post-	Scale	Pre-	Post-
A	3	4	Hs	13	11
B	3	4	D	27	24
C	1	2	Hy	20	17
E	4	5	Pd	21	18
F	4	4	Mf	42	41
G	6	5	Pa	11	10
H	4	3	Pt	34	26
I	4	6	Sc	28	20
L	7	7	Ma	15	12
M	6	7	Si	40	38
N	3	4			
O	7	8			
Q1	4	4			
Q2	7	6			
Q3	5	6			
Q4	7	8			

TABLE C.8

16PF and MMPI Scores Pre- and Post-Treatment

JANE (GT 3)

16PF (Stens)

Factor	Pre-	Post-
A	2	5 *
B	7	6
C	4	1 *
E	5	7
F	9	7
G	5	3
H	6	3 *
I	7	6
L	5	9 **
M	7	9
N	7	7
O	6	8
Q1	8	9
Q2	7	4 *
Q3	4	3
Q4	8	10

MMPI (Adjusted Scores)

Scale	Pre-	Post-
Hs	23	24
D	44	38
Hy	33	29
Pd	34	27
Mf	38	39
Pa	12	11
Pt	42	42
Sc	43	45
Ma	20	17
Si	33	42

* p = 0.023

** p = 0.004

TABLE C.9

16PF and MMPI Scores Pre- and Post-Treatment

MARY (GT 4)

16PF (Stens)			MMPI (Adjusted Scores)		
Factor	Pre-	Post-	Scale	Pre-	Post-
A	4	4	Hs	15	19
B	8	8	D	29	32
C	5	4	Hy	28	34
E	4	6	Pd	37	41
F	6	5	Mf	43	39
G	3	3	Pa	14	14
H	6	7	Pt	38	40
I	5	6	Sc	34	34
L	4	4	Ma	22	24
M	8	6	Si	30	23
N	4	4			
O	7	5			
Q1	4	6			
Q2	6	6			
Q3	4	3			
Q4	6	3*			

* p = 0.023.

TABLE C.10

16PF and MMPI Scores Pre- and Post-Treatment

LIL (GT 5)

16PF. (Stens)			MMPI (Adjusted Scores)		
Factor	Pre-	post-	Scale	Pre-	Post-
A	7	7	Hs	13	9
B	8	9	D	29	23
C	2	3	Hy	21	16
E	6	7	Pd	21	20
F	6	7	Mf	40	38
G	4	4	Pa	12	8
H	2	3	Pt	33	29
I	8	8	Sc	31	22
L	9	7	Ma	19	15
M	9	9	Si	35	32
N	3	1			
O	8	7			
Q1	6	4			
Q2	5	3			
Q3	1	2			
Q4	10	8			

TABLE C.11

16PF and MMPI Scores Pre- and Post-Treatment

VI (GT 6)

16PF (Stens)

Factor	Pre-	Post-
A	4	6
B	8	8
C	3	3
E	5	5
F	5	5
G	6	6
H	4	3
I	2	6 *
L	5	7
M	2	4
N	4	6
O	9	10
Q1	5	4
Q2	5	5
Q3	6	6
Q4	6	8

MMPI (Adjusted Scores)

Scale	Pre-	Post-
Hs	19	13
D	32	26
Hy	23	18
Pd	19	25
Mf	33	38
Pa	11	14
Pt	36	38
Sc	31	31
Ma	18	19
Si	38	43

$* \ p = 0.004$

TABLE C.12

16PF and MMPI Scores Pre- and Post-Treatment

FRITZ (GT 7)

16PF (Stens)

Factor	Pre-	post-	
A	3	5	
B	9	8	
C	4	5	
E	8	9	
F	6	8	
G	7	6	
H	6	8	
I	4	1	**
L	7	7	
M	7	3	***
N	7	6	
O	4	5	
Q1	7	7	
Q2	9	8	
Q3	6	7	
Q4	7	5	

MMPI (Adjusted Scores)

Scale	Pre-	Post-	
Hs	7	6	
D	15	15	
Hy	17	12	
Pd	20	13	*
Mf	24	25	
Pa	13	9	
Pt	24	17	
Sc	19	14	
Ma	27	21	
Si	17	20	

* p = 0.045

** p = 0.023

*** p = 0.004

APPENDIX D

TOPICS and QUESTIONS IN CLINICAL INTERVIEWS

TOPICS AND QUESTIONS IN CLINICAL INTERVIEWS

Pre-Treatment

1. What do you expect to gain from the group experience?
2. What prompted you to go and see a psychiatrist?
3. What sort of person do you consider yourself to be? For example, what are your strengths and weaknesses?
4. Have you ever been in a group before? What do you know about group therapy?
5. What are your major concerns at the present time?
6. How did you come to be the kind of person you are today?

Post-Treatment.

1. What are your feelings and reactions towards the group experience you have just been through?
2. What do you feel you have learned as a result? Can you use the learning?
3. What do you think the therapist was up to? Do you think he was responsible for you learning something, or even not learning?
4. Were you able to see any pattern to what the therapist was doing? Can you give me some examples of the kind of technique he adopted?
5. How would you define therapy? Do you feel that this was a therapeutic experience for you?
6. Would you recommend this experience for others? Do you feel your group needed more time together, or is twenty hours long enough?

7. Do you still envisage going to see a psychiatrist? Did you get an answer to your major concerns? What do you feel is the major concern you have today? Has it changed in anyway from a month ago?
8. Did the equipment, doors, camera, observers, etc., bother you in anyway?

APPENDIX E

TALLY SHEET for V.A.S.T.

EMOTIONS ↓ TOPICS →		THERAPY A	SELF B	THERAPIST C	GROUP-PEERS D	MARRIAGE E	PARENTS F	CHILDREN G	WORK H	OTHER PEOPLE I	TOTAL
POSITIVE AFFECT 1											
NEUTRAL-OBJECTIVE 2											
NEGATIVE AREAS	ANXIETY-FEAR 3										
	ANGER-HOSTILITY 4										
	FRUSTRATION-SORROW 5										
TOTAL											NUMBER OF ACTS

FIGURE F.1

APPENDIX F

RULES of V.A.S.T. CODING SYSTEM

RULES OF V.A.S.T. CODING SYSTEM

1. Attempt to 'push' acts out to affect category whenever possible -- avoid neutral category if at all possible.
2. If act has no obvious personal object, for example, 'self', 'therapist' or 'significant other', then code in general content category;that is, 'therapy'.
3. If 'self' and 'other person' are referred to in one act, then code in 'self' category.
4. Always attempt to code manifest meaning, avoid latent meaning.
5. Attention should be paid to the language content of an act and to the pitch, intonation and tone also.

APPENDIX G

RELIABILITY OF V.A.S.T.

TABLE G.1

Overall Reliability (Dean Post-Treatment Interview)

Category	J.M. %	M.J.O. %	%Diference	$\frac{(\text{Average }\%)^2}{100}$
1A	4.1	3.2	0.9	0.12
1B	-	-	-	-
1C	0.5	-	-	-
1D	0.2	0.3	0.1	-
2A	18.1	16.2	1.9	2.92
2B	5.1	5.2	0.1	0.26
2C	6.8	5.5	1.3	0.37
2D	7.5	6.9	0.6	0.51
3A	4.6	5.0	0.4	0.23
3B	3.9	6.5	2.6	0.27
3C	0.7	1.0	0.3	0.01
3D	1.7	2.0	0.3	0.03
4A	5.8	3.7	2.1	0.22
4B	0.5	2.5	2.0	0.02
4C	2.7	3.5	0.8	0.09
4D	1.0	2.2	1.2	0.03
5A	9.2	9.5	0.3	0.86
5B	14.7	13.7	1.0	2.02
5C	3.6	5.0	1.4	0.18
5D	7.3	8.2	0.9	0.59
			18.7	8.73

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 18.7) - 8.73}{100 - 8.73} = 0.80$$

TABLE G.2

Reliability of Affect Categories (Dean Post-Treatment Interview)

Category		J.M. %	M.J.O. %	% Difference	$\frac{(\text{Average }\%)^2}{100}$
Postive Affect	1	4.8	3.5	1.2	0.17
Neutral	2	37.3	33.9	3.4	12.67
Anxiety	3	13.3	14.4	1.1	1.90
Anger	4	9.9	11.9	2.0	1.19
Frustration	5	34.6	36.4	1.8	12.60
				9.5	28.63

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 9.5) - 28.63}{100 - 28.63} = 0.87$$

TABLE G.3

Reliability of Theme Categories (Dean Post-Treatment Interview)

Category		J.M. %	M.J.O. %	% Difference	$\frac{(\text{Average }\%)^2}{100}$
Therapy	A	41.6	37.6	4.0	15.68
Self	B	24.0	28.0	4.0	7.96
Therapist	C	14.2	15.0	0.8	2.13
Group-Peers	D	17.6	19.7	2.1	3.46
				10.9	29.23

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 10.9) - 29.23}{100 - 29.23} = 0.85$$

APPENDIX H

RESULTS of V.A.S.T. ANALYSIS

TABLE H.1

VAST Coding System Results: Affect Categories GAT and GT Groups.

Subject	POSITIVE		NEUTRAL		ANXIETY		ANGER		FRUSTRATION	
	1		2		3		4		5	
	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %
Nancie	10.5	1.1	19.5	39.6	31.4	13.7	21.6	31.6	16.9	13.8
Lucie	4.2	4.1	39.0	36.4	23.4	21.6	9.3	12.6	24.2	31.2
Lois	5.7	12.4	27.0	65.0	25.4	2.3	12.1	3.2	29.8	17.4
Katie	4.2	4.3	48.0	51.0	11.2	13.6	14.1	14.9	22.6	15.9
Carol	4.4	4.7	16.5	57.0	21.5	12.6	14.0	10.0	43.6	16.2
Dean	6.9	3.5	38.4	33.9	10.6	14.5	9.8	11.9	34.3	36.4
Lana	5.7	6.2	44.8	76.0	7.3	3.1	22.6	4.2	20.8	10.7
Sylvia	7.6	10.1	46.5	41.7	6.8	9.5	20.0	22.6	19.3	16.2
Jane	2.2	11.5	55.5	27.0	10.6	18.2	1.6	4.2	30.2	39.2
Mary	8.2	6.6	62.5	48.4	11.3	12.4	4.2	12.2	13.9	20.4
Lil	11.8	4.3	40.0	44.7	15.7	14.9	8.3	11.1	24.4	25.0
Vi	8.2	14.9	31.0	37.0	19.2	13.7	13.0	14.1	28.7	20.2
Fritz	4.4	4.5	58.4	75.5	6.3	4.5	13.4	6.0	17.7	9.5

TABLE H.2

VAST Coding System Results: Theme Categories (GAT Group)

Category → / Subject ↓	Therapy A		Self B		Therapist C		Group Peers D		Marriage E		Parents F		Children G		Work H		Other People I	
	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
NANCIE	10.9	36.3	30.7	13.5	—	28.1	—	15.5	43.2	—	1.4	—	4.0	—	0.2	—	9.6	5.5
LUCIE	5.2	30.6	42.5	28.0	—	25.8	—	15.5	28.8	—	2.1	—	0.6	—	20.0	—	5.8	—
LOIS	7.0	28.4	68.0	26.0	—	17.5	—	23.0	2.5	—	1.0	—	13.6	—	—	—	8.4	—
KATIE	4.9	21.4	36.2	20.8	—	19.7	—	29.0	19.9	3.2	24.6	3.6	4.9	0.1	2.3	—	7.3	1.9
CAROL	3.9	26.4	34.4	32.4	—	25.2	—	7.6	45.5	6.5	4.4	—	—	—	0.7	—	11.1	2.1
DEAN	8.2	37.6	70.5	28.0	—	15.0	—	19.7	5.9	—	12.2	—	—	—	—	—	3.4	—

TABLE H.3

VAST Coding System Results: Theme Categories (GT Group)

Category → / Subject ↓	Therapy A		Self B		Therapist C		Group Peers D		Marriage E		Parents F		Children G		Work H		Other People I	
	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
LANA	6.6	18.3	38.0	19.8	—	30.2	—	27.8	52.5	3.4	0.5	—	—	—	—	0.4	2.7	—
SYLVIA	6.0	17.0	31.0	22.6	—	21.8	—	34.7	11.7	3.9	35.8	—	4.3	—	2.8	—	6.5	—
JANE	7.0	24.2	48.5	43.5	—	11.3	—	15.5	32.8	3.7	9.3	—	0.9	—	1.0	—	0.4	1.9
MARY	4.5	19.8	37.0	11.4	—	34.3	—	34.3	30.8	—	6.5	—	9.7	—	0.1	—	11.5	—
LIL	16.7	23.7	43.0	37.2	—	17.8	—	20.3	18.0	—	2.6	1.0	—	—	9.4	—	10.4	—
VI	5.1	25.0	37.0	14.3	—	32.2	—	26.8	33.0	1.0	5.4	—	12.5	—	—	—	7.1	0.6
FRITZ	8.0	18.4	33.6	35.0	—	22.4	—	15.6	5.3	0.4	7.7	—	0.2	—	25.5	0.9	19.5	7.3

TABLE H.4

VAST Results: Affect Categories for Self Theme

(GAT and GT Groups)

Subject	POSITIVE 1		NEUTRAL 2		ANXIETY 3		ANGER 4		FRUSTRATION 5	
	PRE %	POST %	PRE %	POST %	PRE %	POST %	PRE %	POST %	PRE %	POST %
NANCIE	0.9	0.1	3.4	6.8	15.4	1.8	2.6	1.1	8.3	3.7
LUCIE	0.2	0.9	11.1	7.9	16.9	11.7	1.0	0.5	13.2	6.9
LOIS	1.0	4.4	21.0	15.0	24.4	1.9	4.5	---	22.7	4.6
KATIE	0.2	---	16.0	8.5	7.0	7.0	1.4	1.6	11.7	3.6
CAROL	---	2.1	3.4	15.0	11.6	7.3	4.4	0.6	15.0	7.3
DEAN	2.4	---	27.0	5.2	9.0	6.5	4.6	2.5	27.5	13.7
LANA	0.8	0.4	20.2	16.6	5.6	1.2	1.9	0.8	9.7	0.7
SYLVIA	2.2	8.2	14.4	9.0	3.4	3.1	1.8	3.9	9.3	2.7
JANE	0.6	---	24.9	9.6	6.8	13.5	0.6	0.7	15.7	19.7
MARY	1.0	0.5	16.9	2.5	7.8	7.0	1.6	---	9.7	1.5
LIL	1.2	1.3	14.5	14.1	9.4	9.4	2.5	3.9	15.6	8.5
VI	2.5	1.4	10.6	2.7	10.4	6.7	2.0	---	11.4	3.5
FRITZ	0.5	0.7	19.6	25.0	4.3	4.3	1.5	1.9	7.6	4.7

TABLE H.5

Change in Clients' Affect Categories and Concomitant Change in Interviewer's Affect Categories (Pre- to Post-)

(GAT Group)

	POSITVE 1	NEUTRAL 2	ANXIETY 3	ANGER 4	FRUSTRATION 5
Nancie	-	+	-	+	-
Interviewer	-	-	-	+	+
Lucie	0	-	-	+	+
Interviewer	-	-	-	+	+
Lois	+	+	-	-	-
Interviewer	-	0	+	+	-
Katie	0	+	+	+	-
Interviewer	0	-	-	+	+
Carol	+	+	-	-	-
Interviewer	+	+	+	+	-
Dean	-	-	+	+	+
Interviewer	-	-	+	+	+

KEY: + = increase in percentage of acts emitted

- = decrease " " " " "

0 = no change

TABLE H.6

Change in Clients' Affect Categories and Concomitant Change in Interviewer's Affect Categories (Pre- to Post-)

(GT Group)

	POSITIVE 1	NEUTRAL 2	ANXIETY 3	ANGER 4	FRUSTRATION 5
Lana	+	+	-	-	-
Interviewer	-	-	-	+	+
Sylvia	+	-	+	+	-
Interviewer	+	-	+	+	+
Jane	+	-	+	+	+
Interviewer	+	-	-	+	+
Mary	-	-	+	+	+
Interviewer	+	-	+	+	+
Lil	-	+	-	+	+
Interviewer	-	-	-	+	+
Vi	+	+	-	+	-
Interviewer	-	-	-	+	+
Fritz	0	+	-	-	-
Interviewer	-	+	-	+	-

KEY: As for Table H.5

TABLE H.7

GAT & GT GROUPS: Themes (Pre- to Post-) Primary and Secondary Affiliation.

Subject	References to Primary Affiliation (B, E, F & G) Percentages PRE	POST	DECREASE	References to Secondary Affiliation (A, C, D, H & I) Percentages PRE	POST	INCREASE
Nancie	79	14	65	21	86	65
Lucie	74	28	46	26	72	46
Lois	85	26	59	15	74	59
Katie	86	8	78	14	92	78
Carol	84	39	45	16	61	45
Dean	89	28	61	11	72	61
Lana	91	23	68	9	77	68
Sylvia	83	26	57	17	74	57
Jane	91	47	44	9	53	44
Mary	84	11	73	16	89	73
Lil	64	38	26	36	62	26
Vi	88	15	73	12	85	73
Fritz	47	35	12	53	65	12